NORTHERN ALBERTA TODAY

Alberta

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COVER

The Peace River Country

NORTHERN ALBERTA TODAY

The Northern Alberta Development Council is pleased to present this information profile on northern Alberta. The council wishes to thank Praxis and the many northerners who contributed to its compilation.

The information and data in this publication have come from a wide variety of sources.

Much of the data comes from either Statistics Canada, the Alberta Bureau of Statistics or the Northern Development Branch, Alberta Tourism and Small Business. Other data come from a wide variety of provincial government departments and agencies with responsibilities for northern Alberta.

At the time of going to press, the data were the most current available; however, new information is continually being developed and updated.

This information profile provides an overview of northern Alberta. Those readers desiring more detailed information should contact the Northern Development Branch or the appropriate departments of the Government of Alberta.

Northern Alberta Development Council
Peace River, Alberta
October, 1985

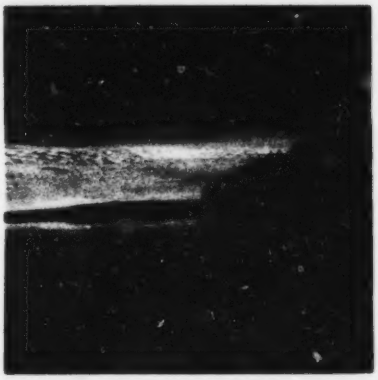
NORTHERN IMAGES

Alberta is one of the most dynamic of Canada's ten provinces in terms of economic, population and social change. What few people realize is that a significant portion of the province's economic growth has its focus in northern Alberta. Whether it be in non-renewable resource extraction in the shape of oil, gas, oil sands, or heavy oils, or in renewable resource development like forestry, hydro-electric development, or hunting and fishing, the activity is located predominantly in northern Alberta.

"The North" cannot be described in any single image. Rather, northern Alberta is a land of contrasts; perhaps it is this very diversity which most captivates people's imaginations.

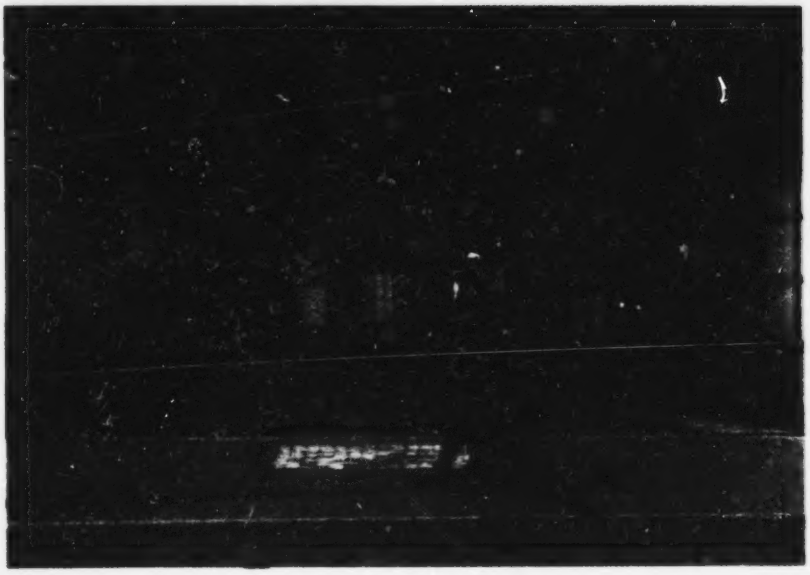
This information profile is designed to clarify some of the images about northern Alberta – images of the land, the people, the economy, of society and of culture. It will illustrate the tremendous diversity in the region, and describe the changes which are taking place across the North.

On one hand, the majority of northern Alberta's people live in modern communities well served with amenities and rich in cultural life, recreational facilities and other services which contribute to an interesting and enjoyable environment. On the other hand, northern Alberta can still be considered one of Canada's last frontiers, a vast and sparsely settled area. The North remains a land of opportunity with a wealth of resources, where hard work and a willingness to rise to challenges will be rewarded.



The skies and waters of the North

Reality and illusion: Grande Prairie wall mural



Grain elevators in Fairview

◁ *A misty dawn in northern Alberta*

The original pioneer spirit has influenced the northern way of life in many positive ways. Northerners are independent, yet families and neighbors help each other, and people co-operate to achieve their goals. The North is friendly and congenial; people are open, trusting and helpful in ways not common in large metropolitan centres.

A paradox exists in that, while communities and people feel independent and self-sufficient, northerners are nonetheless dependent on external markets for the viability of their economy.

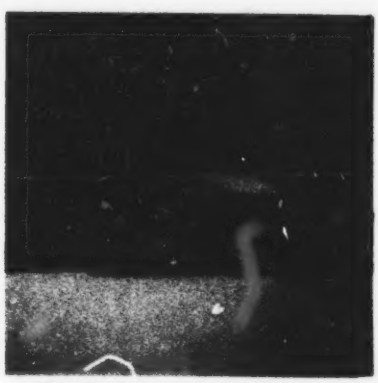
Another facet of northern Alberta's contrasting images is that of change. On one hand there has been rapid change in many communities. The North today has a "new look". It is not what it was a decade ago, nor, in many instances, even five years ago. There has been extensive capital investment, not only in the gigantic tar sands developments and in many kilometres of roads, but also in facilities such as hospitals, schools, theatres, performing arts centres, multicultural complexes, modern houses, shops and restaurants. There have also been cultural changes and developments. In many places, the arts are flourishing to a degree unknown in southern communities of comparable size.

Transporting logs

"Northern Alberta is the best kept secret in Canada."

Evidence of the North's rich history contrasts with the modern Dunvegan Bridge

A producing oil well in winter



Winter beauty

Hay field and cumulus clouds

Contrasts such as these pervade northern Alberta today. They begin with its land – a mixture of forest, prairie, wetlands and hills – and also characterize its industry, its settlements, its people, its strengths and its weaknesses. The remainder of this profile describes these aspects of northern Alberta. As will be seen, there is no one single identity or image of the North; it is a montage of differing and changing economic, social and physical attributes.

"There is nothing common about the North "

On the other hand, change has not been pervasive. While new technologies and new ways of living are being adopted, important traditions are still retained. The "old ways" are valued: the pioneer spirit among homesteaders, the traditional ways of life of the native peoples, the heritage buildings and other physical reminders of the past. Native communities, and other groups, are making conscious efforts to maintain their historic culture and keep it alive, in the face of change. For example, in some native communities evidence of modern life – snowmobiles, or a new architect-designed school – coexists with signs of traditional activities: moose skins drying, a birchbark canoe under construction, or traps being repaired.

White water rafting on the Slave River

THE LAND

THE LANDSCAPE

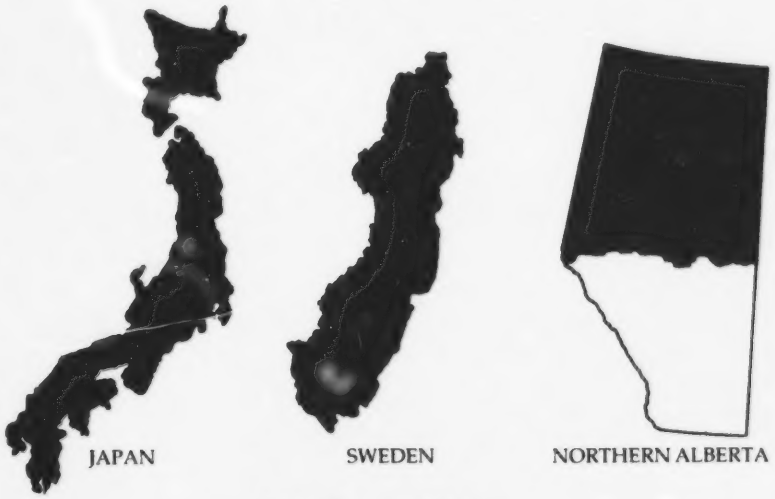
"Northern Alberta" refers to the area served by the Northern Alberta Development Council (NADC). It lies between the 56th and 60th parallels and includes 60 per cent of Alberta's area - nearly 400 000 square kilometres (152,000 square miles). This approximates the size of heavily populated countries such as Japan which is 377 765 square kilometres and Sweden with 411 506 square kilometres. In contrast, northern Alberta is sparsely populated. This creates both benefits and challenges for those living and working throughout the region.

Northern Alberta in Canada

◁ *Morning on a northern lake*

The vastness of the North

The Alberta Government is the major land holder in the North, contrasting with the situation in southern Alberta where most land is in private ownership. This has implications for land use planning and management, the settlement process and the development of renewable and non-renewable resources.



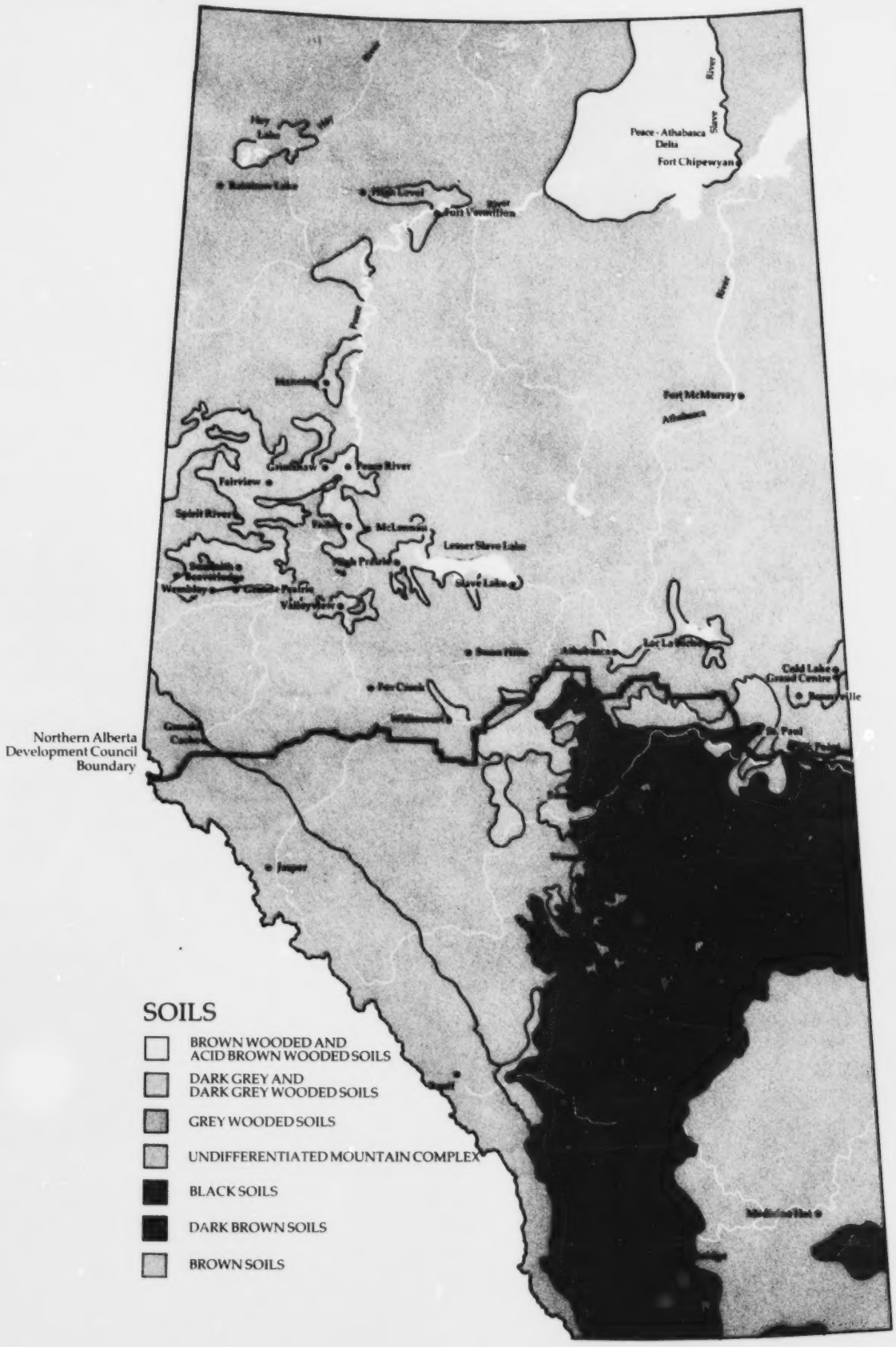
Northern Alberta
Compared with Sweden and Japan

Northern Alberta in the World

Aspen at sunset

A seismic cutline through an autumn forest

Rainbow Lake
High Level
Manning
Fort McMurray
Grimshaw
Peace River
Fairview
Spirit River
Falher
McLennan
Sexsmith
Beaverlodge
Wembley
Grande Prairie
Valleyview
High Prairie
Slave Lake
Athabasca
Lac La Biche
Cold Lake
Grand Centre
Bonnyville
St. Paul
Elk Point
St. Albert
Edmonton
Lloydminster
Camrose
Medicine Hat
Lethbridge
Northern Alberta Development Council Boundary
BEDROCK GEOLOGY
CANADIAN SHIELD
PRECAMBRIAN SHIELD
GRANITE GNEISS QUARTZITE
INTERIOR PLAINS
TERTIARY
SANDSTONE SHALE COAL
LOWER CRETACEOUS
SHALE OIL SANDS
UPPER CRETACEOUS
SANDSTONE SHALE COAL
BENTONITE
DEVONIAN
LIMESTONE DOLOMITE
SALT GYPSUM
CORDILLERA
FOOTHILLS CRETACEOUS, JURASSIC AND TRIASSIC FORMATIONS
SANDSTONE SHALE COAL CARBONATE ROCKS GYPSUM
ROCKY MOUNTAINS PALEOZOIC AND PRECAMBRIAN
SEDIMENTARY ROCKS: LIMESTONE, DOLOMITE, SHALE, QUARTZITE


Peace - Athabasca Delta
Fort Chipewyan
Fort McMurray
Athabasca
Peace River
Fairview
McLennan
Lesser Slave Lake
Slave Lake
Cold Lake
Grand Centre
Northern Alberta Development Council Boundary
SOILS
BROWN WOODED AND ACID BROWN WOODED SOILS
DARK GREY AND DARK GREY WOODED SOILS
GREY WOODED SOILS
UNDIFFERENTIATED MOUNTAIN COMPLEX
BLACK SOILS
DARK BROWN SOILS
BROWN SOILS

Variety in landform and vegetation

With the exception of a small portion of northeastern Alberta which is part of the Canadian Shield, northern Alberta is part of the Canadian Plains. Within these plains, great variety exists: flat-topped, high-hill regions; rolling upland areas; undulating and flat lowlands; wetlands and lake-covered regions. Approximately three quarters of northern Alberta is covered by forest while another 11 per cent has been cleared for agricultural purposes. Rivers, lakes and wetlands comprise the remaining area.

The wide variety of landforms in northern Alberta contributes to the beauty and scenic wonder of its outdoors. Here, one can find the awe-inspiring vastness of forests and foothills, waving grain fields, tranquil marshes, undulating valley landscapes and the power and force of mighty rivers.

The Canadian Shield at Fort Chipewyan

Northern wetlands

The sand dunes of Alberta

The Swan Hills is the most prominent land form east of the Rockies, rising to 1 155 metres (3,800 feet). Many other hilly regions, remnants of ancient plains, exist in the North. These hills are composed of shales which are very susceptible to water erosion, creating valleys with steep unstable banks.

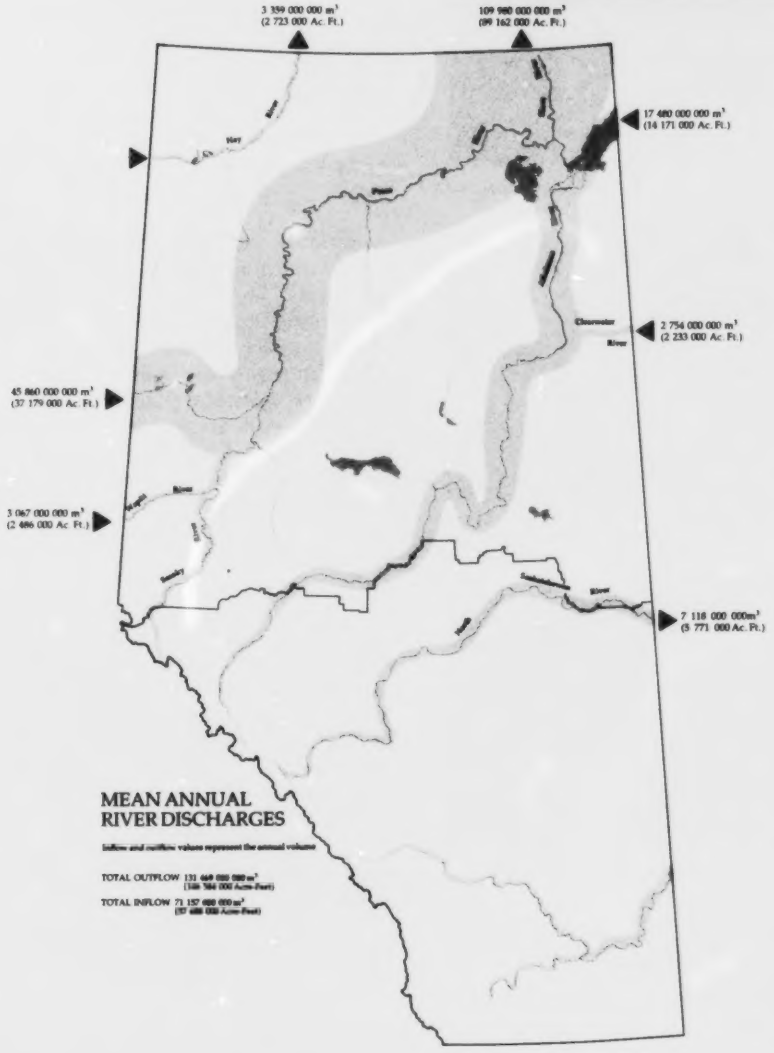
Among the hilly regions are plains rich in sediments from ancient lake beds. These have formed the good agricultural soil in the Peace River country; further north and east, the result has been extensive muskegs. At some places, where the sediments are sandy in character, the wind has formed large sand dunes. Now largely stabilized by vegetation, these dunes are located south of Grande Prairie and near Wood Buffalo National Park.

A significant alluvial plain is the Peace-Athabasca delta, one of the world's largest inland deltas. An area of 9 200 square kilometres (3,500 square miles), the delta consists of large marshes, muskegs and shallow lakes. Smaller plains can be found at Hay Lake in the northwest and at the rivers emptying into Lesser Slave Lake. These areas have become the most lush and productive breeding grounds in North America for waterfowl and wildlife.

THE LAKES AND RIVERS

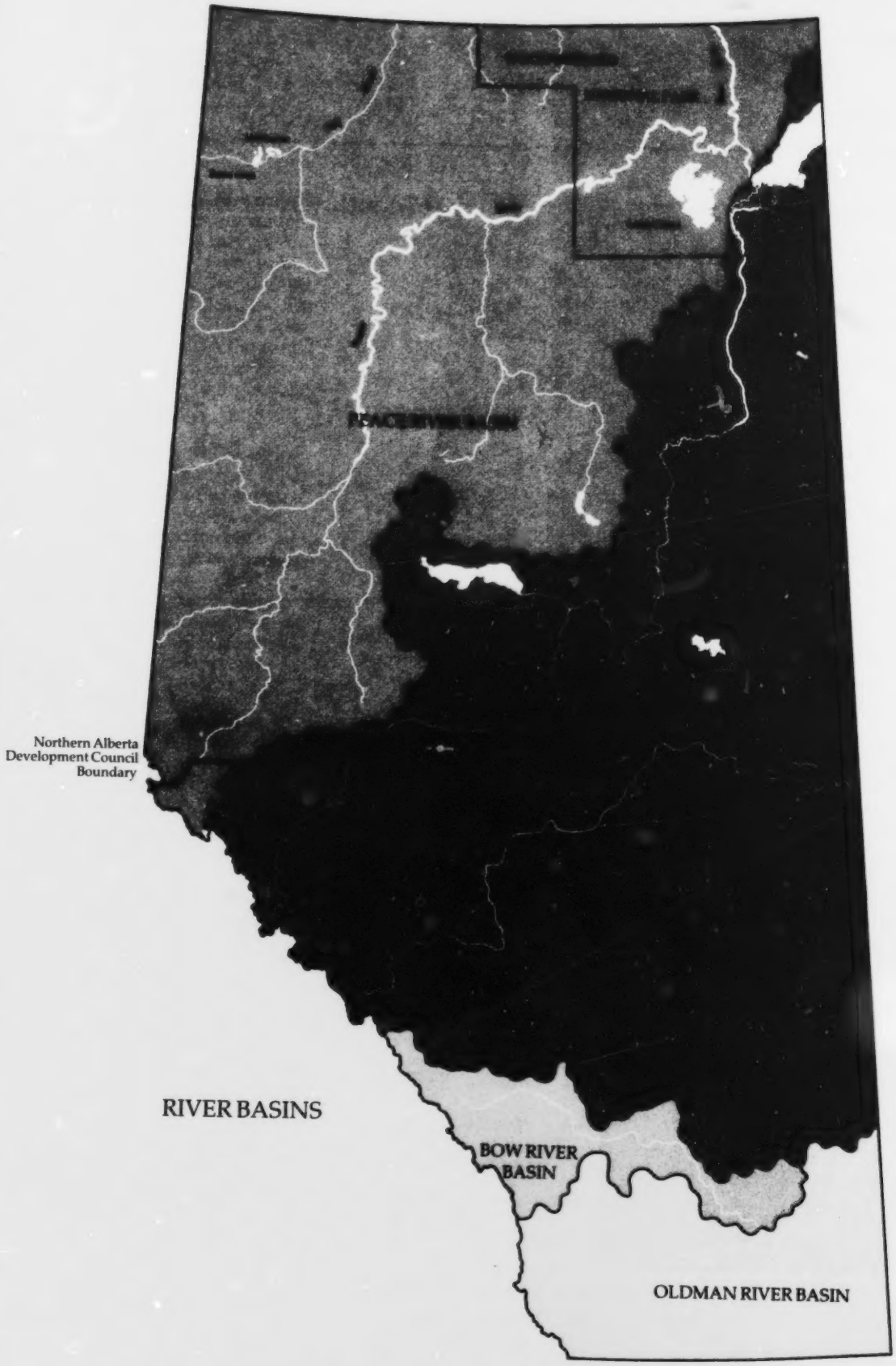
Northern Alberta and water are synonomous. Lesser Slave Lake, Lake Athabasca, and countless smaller lakes, rivers and streams account for over 17 000 square kilometres (6,465 square miles). The Lakeland region of northeast Alberta has well in excess of one hundred pristine quality lakes.

Driftwood on the beaches of Lesser Slave Lake



The majority of northern Alberta lies within the Mackenzie river system. The river basins forming this system include the Athabasca, Peace, Slave and Hay rivers. Over 90 per cent of the mean annual river discharge in Alberta flows through the North, and over 80 per cent exits via the Slave River in the northeast. The Peace basin has the largest volume of water of any Alberta basin, although two-thirds of the water originates in British Columbia. During the four years required for filling Williston Lake, behind the W.A.C. Bennett dam in B.C., water levels were substantially lowered in the ecologically rich, but sensitive, Peace-Athabasca delta. Water levels have now improved in the delta with the construction of weirs on the Peace River, but the area is still subject to fluctuations because of the dam.

"I don't understand why Lesser Slave Lake is so unknown – it's one of the most exceptional lakes I know of, with pure water and spectacular beaches."

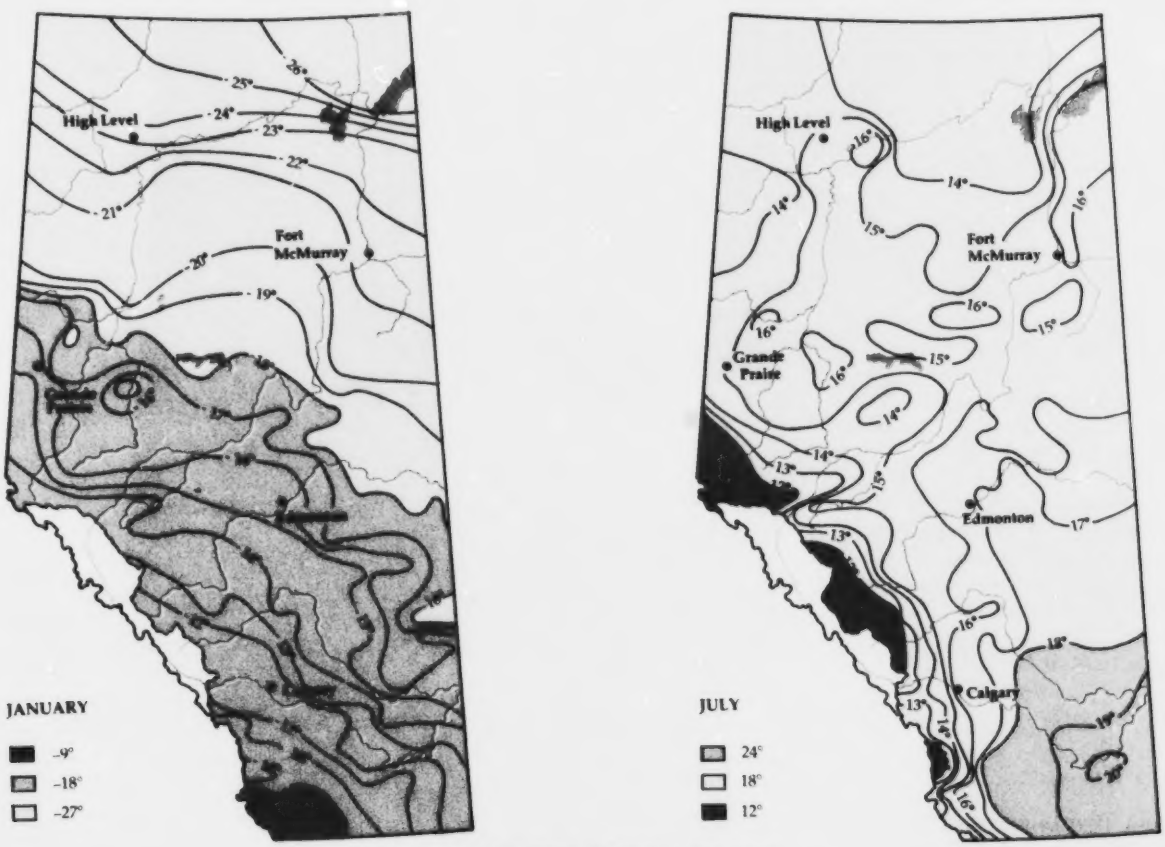

Northern Alberta
Development Council
Boundary
RIVER BASINS
BOW RIVER
BASIN
OLDMAN RIVER BASIN

THE CLIMATE

Many non-northerners perceive the North as a land of year-round winter. While, no doubt, there are colder and somewhat longer winters than in southern Alberta, summer temperatures are comparable to those in Edmonton or Calgary and only slightly cooler than cities such as Ottawa and Winnipeg. Cold winter temperatures are frequently associated with low wind velocities, low moisture content, and clear skies; thus the cold is not felt as bitterly as in more humid, windy areas.

Average Monthly Temperature

	January	April	July
Fort Chipewyan	-26	-2°	15°
High Level	-24	0°	15°
Fort McMurray	-21	1°	16°
St. Paul	-18	3°	17°
Grande Prairie	-16	2°	15°
Edmonton	-16	3°	17°
Calgary	-12	3°	16°
Ottawa	-11	5°	21°
Winnipeg	-19	3°	20°

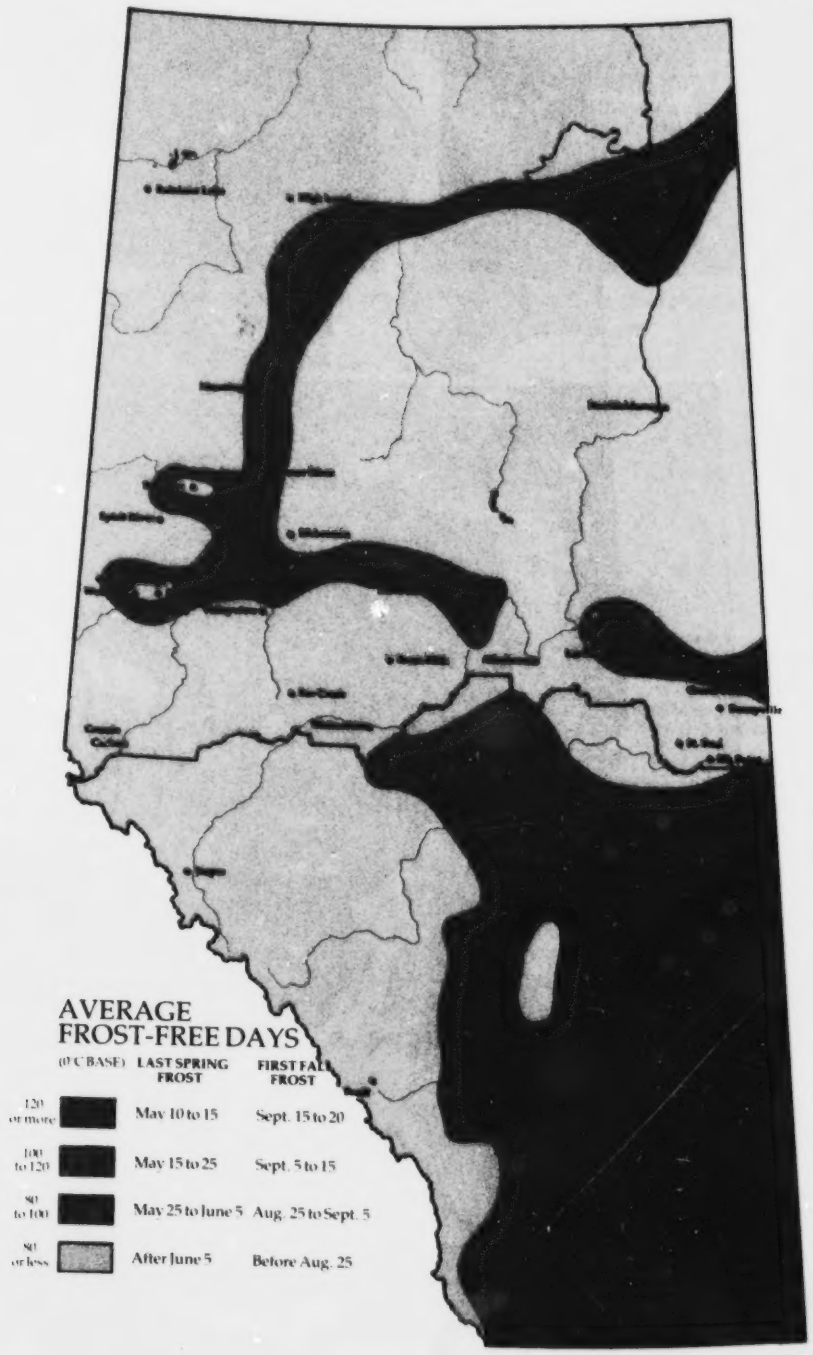


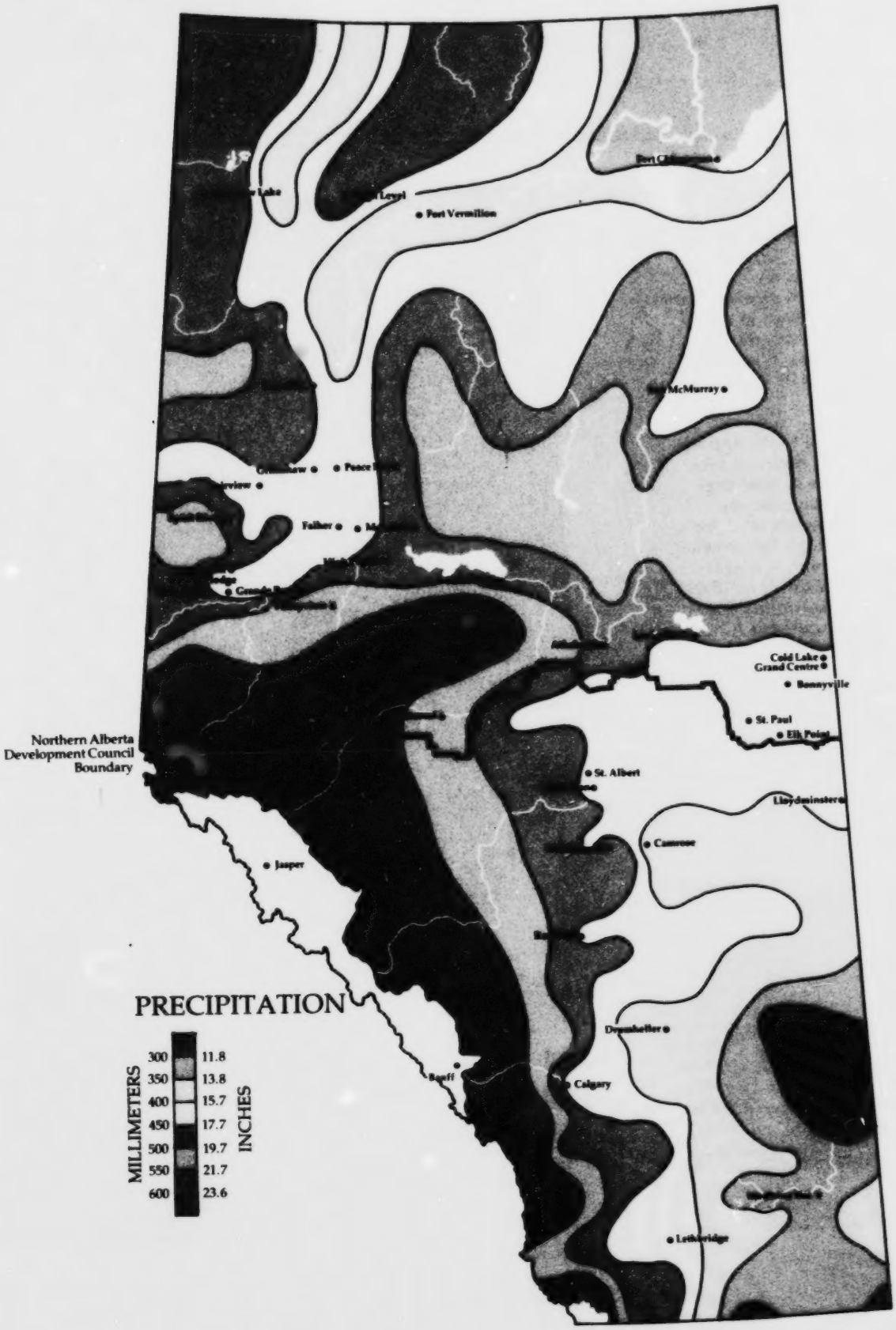
MEAN TEMPERATURE
ISOTHERMS IN
DEGREES CELSIUS

The chart illustrates that, although January temperatures are colder in the far north than they are in centres like Calgary, Edmonton, Winnipeg or Ottawa, by July the differences are much smaller. The amount of precipitation in northern Alberta varies with the topography, as it does in southern Alberta, tending to be higher at higher elevations.

Two factors critical to the agricultural potential are hours of sunshine and number of frost-free days. Northern summers are characterized by extremely long days. Thus, although the growing season may be short, it is also intense. And, the lower elevation of the Peace River country compared to that of southern Alberta reduces the risk of frost and prolongs the growing season. For example, Peace River at 571 metres (1,873 feet) is half the elevation of Calgary at 1 049 metres (3,442 feet).

Winter travel




Northern Alberta
Development Council
Boundary
Fort Vermilion
Fort McMurray
Cold Lake
Grand Centre
Bonnyville
St. Paul
St. Albert
Lloydminster
Camrose
Jasper
Drumheller
Banff
Calgary
Lethbridge
PRECIPITATION
MILLIMETERS
300
350
400
450
500
550
600
INCHES
11.8
13.8
15.7
17.7
19.7
21.7
23.6

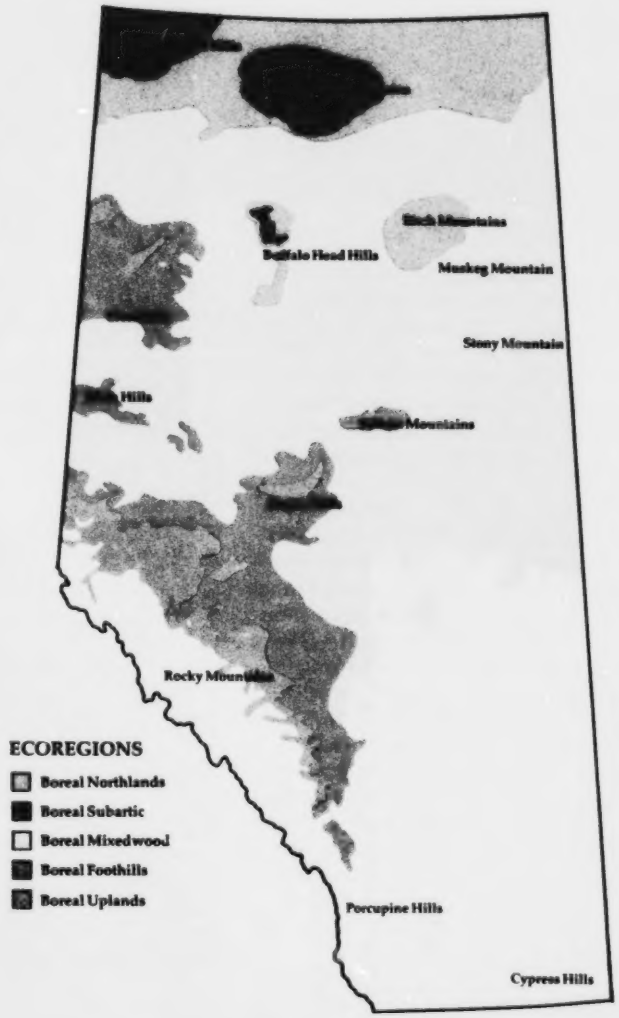
THE ECOLOGY

Northern Alberta has five ecoregions, defined as "areas characterized by a distinctive regional climate as expressed by vegetation."

- Boreal-Mixed Wood - This is the most widespread area in the north, covering about two-thirds of the region. The vegetation consists of aspen and balsam poplar, with some white spruce and balsam fir.
- Boreal Foothills - This ecoregion occurs at higher elevations than the Boreal-Mixed Wood ecoregion. It is a transitional zone, containing a wide range of trees: aspen, balsam poplar, paper birch, lodgepole pine, white spruce, black spruce and fir.
- Boreal Uplands - This ecoregion exists at altitudes below the subalpine, primarily along the Rocky Mountains, and in the Swan and Clear Hills. The region is dominated by coniferous forests of white and black spruce.
- Boreal Northlands - This region is found in the northern part of the province, with small sections found at the upper elevations of the Buffalo Head Hills and Birch Mountains. There, vegetation is a mix of aspen and white spruce. On poorly drained sites, black spruce dominates.
- Boreal Subarctic - This region occurs in the Cameron Hills, Cariboo Mountains and Buffalo Head Hills. It is characterized by black spruce with a sparse, mossy ground cover underlain by permafrost.

Fall colors surround a northern town

Confluence of the Smoky and Peace Rivers



WILDLIFE

Wildlife flourishes in northern Alberta. Some of the more abundant species include:

- Fish - Rainbow and lake trout, walleye, pike, lake whitefish, arctic grayling, goldeye and mooneye
- Mammals - Moose, elk, white-tail and mule deer, woodland caribou, black and grizzly bear, coyote, fox, lynx, wolf, beaver, fisher, mink, muskrat, river otter, snowshoe hare, squirrel
- Birds - Arctic nesting geese, mallards and other ducks, large Canada geese, upland birds, sharp-tailed grouse

The image of plentiful fish and wildlife resources needs to be tempered with the need for wildlife management, especially as habitat and stocks may be reduced by such other uses as agriculture, hydro-electric development, forestry, and oil and gas exploration.

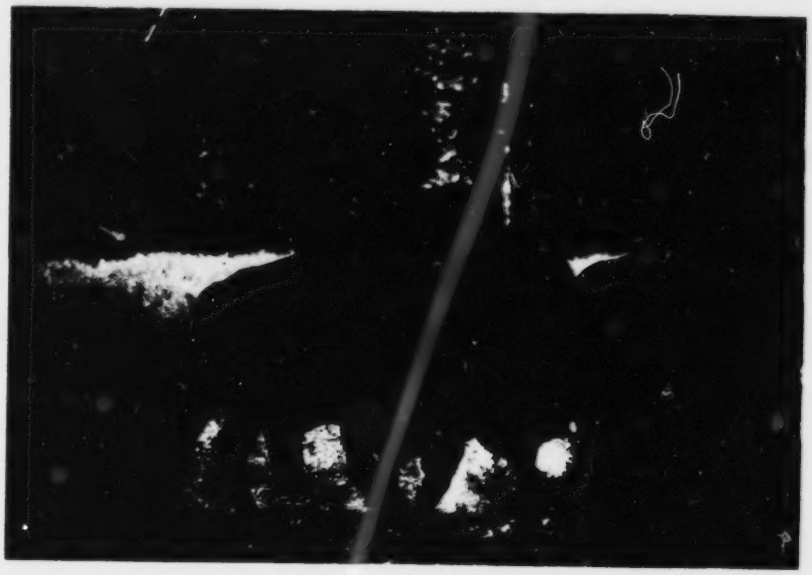
Because of the ideal climate and vegetation, and location on international flyways, whooping cranes and peregrine falcons make their homes in northern Alberta. There are only about 150 whooping cranes remaining in the world today, and about half of these nest in the ideal environment afforded them in Wood Buffalo National Park. Peregrine falcons are similarly low in number, and these are known to breed in northern Alberta.

Mule deer

The North is a major waterfowl habitat.

A small herd of pure wood bison, currently located at Elk Island National Park east of Edmonton, is to be relocated to the Hay Lakes-Zama area of northwestern Alberta. And, in Wood Buffalo National Park a herd of about 5,000 hybrid wood-plains bison make their home.

These species all faced the possibility of extinction but the hospitable environment of northern Alberta is helping to protect them.



Bison in Wood Buffalo National Park

White pelicans

Several other exceedingly rare species also make their home in northern Alberta: white pelicans which nest on islands in six lakes and in the Slave River; short-tailed weasels (ermine); trumpeter swans which nest in the Grande Prairie area; great gray owls; Caspian terns which nest on Lake Athabasca; and wolverine.

The story of the trumpeter swan is of special interest, since it was partly due to the efforts of Grande Prairie residents that this largest of North American waterfowl was saved from extinction. This swan was then adopted in 1958 as Grande Prairie's symbol.

THE PEOPLE

HISTORY

Northern Alberta has a long and exciting history. Prior to the arrival of white traders from eastern Canada, the area was occupied by Athapaskan-speaking Indian peoples – the Chipewyans, Beavers, Slaves and Sarcees. These "forest Indians" had a lifestyle based on trapping, hunting and fishing in response to rhythmic changes in the seasons. They developed an intimate acquaintance with the land, feeling themselves to be a part of the natural world rather than its master. When the Algonkian-speaking Crees of northwestern Ontario acquired firearms, the lifestyle of the native people began to change. The Cree expanded westward and pushed the existing tribes deeper into Alberta's northern forest and the Peace River country. And, as the fur trade expanded, the Indian way of life became linked to the fur trading economy.

In 1754, as part of the English-French rivalry in Canada, Anthony Henday travelled up the North Saskatchewan River from Hudson Bay, becoming the first white man to enter Alberta. The two early explorers of greatest significance were David Thompson and Alexander Mackenzie, each of whom travelled the rivers in northern Alberta extensively. In 1793 Mackenzie, using the Peace, became the first white man to travel overland to the Pacific Ocean.

In the late 1700s the first white settlement in Alberta was established when the Northwest Company's fur-trading post near Fort Chipewyan was built. The 19th century saw fur trading posts

St. Charles Mission at Dunvegan

Fort Chipewyan, the site of Alberta's oldest white settlement

Native burial house

Esso's Cold Lake Project

established throughout the area. Vestiges of the fur trade are still found in the North, in the remains of such old forts as Fort Vermilion, Dunvegan, Fort George/Buckingham House and Fort Assiniboine. Grande Cache is named for the large caches of furs the trappers would store each winter in preparation for shipping in the spring. Missionaries also became active during the 19th century, and it is still possible to find sites of old missions and historic Indian graveyards.

The 1898 Klondike gold rush created pressure on the government to sign a treaty with the Indians because of the potential influx of white prospectors. Treaty 8 was signed in 1899. A small portion of northern Alberta is covered by Treaty 6, signed a few years earlier.

White settlement in northern Alberta began in earnest after the construction of the railroads between 1909 and 1916, sparked by the availability of arable land in the northwestern part of the province. The railroads made this land accessible and large numbers of Europeans settled in the North. In the northeast, the incentive for settlement was mineral deposits rather than farmland. The salt deposits of Fort McMurray were discovered in 1912, and a minor "oil boom" occurred around this time as the Canadian government opened the Athabasca tar sands to exploration. White settlers were also lured by the rich timberlands in the north.

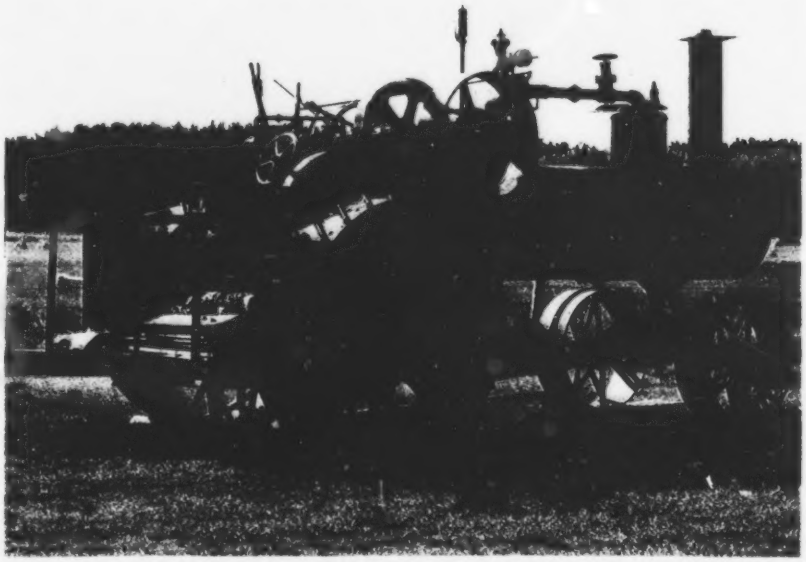
The Great Depression brought even more people into the area when large groups of farmers fled the dustbowl of the prairies for the northern parkland.

Other forces which drew people north were the building of the Alaska Highway during World War II, and the Veterans' Land Act of 1942. This period also saw the construction of the Canol pipeline from Norman Wells on the Mackenzie River to Whitehorse. Northern Alberta served as the port of entry for construction materials which arrived by train and were then barged from Waterways (Fort McMurray) down the Athabasca and Mackenzie Rivers. Winter road access was cut through from Grimshaw north to High Level and Norman Wells.

In 1950, after the first oil well was drilled near Swan Hills, the economy of the North, like that in the rest of Alberta, underwent a rapid transition from one based on agriculture to one dominated by the exploration and development of petroleum resources. As was true of the fur trade, the petroleum industry has focused on the North. In 1964, the Great Canadian Oil Sands Company (Suncor) began construction of a plant in northeastern Alberta to exploit the Athabasca tar sands. This project heralded the beginning of a new era for the North, one characterized by major energy developments.

COMMUNITIES

Although only 10 per cent of Alberta's population lives in the North, the diversity of communities and ethnic backgrounds



Evidence of northern Alberta's long agricultural history

Northern Alberta Population - 1984

Source: Alberta Municipal Affairs

INCORPORATED COMMUNITIES

Over 5000

Fort McMurray	35 352
Grande Prairie	24 411
Peace River	6 043
Whitecourt	5 408

1000-5000

St. Paul	4 963
Slave Lake	4 838
Bonnyville	4 786
Grande Cache	4 624
Fairview	3 234
Grand Centre	3 195
High Level	2 806
High Prairie	2 580
Cold Lake	2 515
Swan Hills	2 497
Grimshaw	2 488
Lac La Biche	2 242
Valleyview	2 232
Fox Creek	1 978
Beaverlodge	1 937
Athabasca	1 862
Manning	1 262
Wembley	1 209
Sexsmith	1 192
Falher	1 188
McLennan	1 176
Elk Point	1 113
Spirit River	1 104

500-1000

Rainbow Lake	856
Rycroft	734
Hythe	681
Boyle	678
Berwyn	674
Hines Creek	529

200-500

Glendon	455
Nampa	435
Donnelly	382
Girouxville	325
Kinuso	285
Plamondon	271
Wanham	266
Fort Assiniboine	214
Eaglesham	201

Under 200

Bonnyville Beach	60
Pelican Narrows	52
Island Lake	81
South Baptiste	47
Island Lake South	42
Bondiss	40
Mewatha Beach	27
Sunset Beach	36
West Baptiste	19
Whispering Hills	11
White Gull	18

INDIAN BANDS

Over 1000

Saddle Lake Band	4 185
Bigstone Cree Band	2 073
Little Red River Band	1 605
Dene Tha' Band	1 440
Cold Lake First Nations	1 077
Cree Band (Fort Chipewyan)	1 064
Frog Lake Band	1 003

500-1000

Kehewin Band	902
Sturgeon Lake Band	885
Driftpile Band	800
Sucker Creek Band	704
Whitefish Lake Band	699

200-500

Tall Cree Band	385
Boyer River Band	333
Beaver Lake Band	319
Chipewyan Band	314
Swan River Band	277
Janvier Band	
Fort McKay Band	224

Under 200

Horse Lake Band	188
Lubicon Lake Band	186
Fort McMurray Band	143
Heart Lake Band	108
Grouard Band	90
Duncan's Band	63
Sawridge Band	38

COUNTIES

Grande Prairie #1	12 078
St. Paul #19	6 352
Athabasca #12	5 936

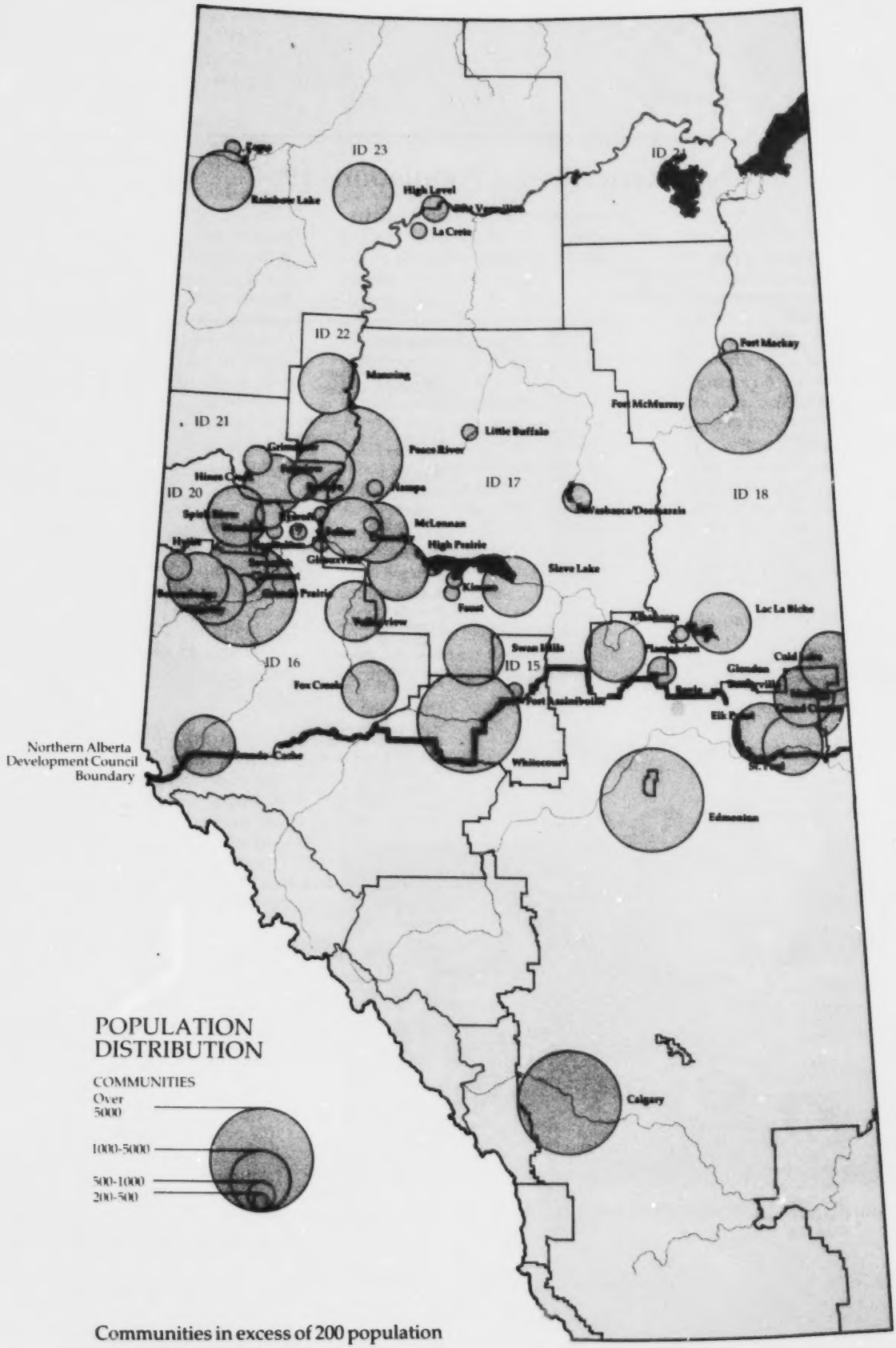
MUNICIPAL DISTRICTS

Bonnyville #87	9 409
Smoky River #130	2 858
Fairview #136	1 889
Peace River #135	1 520
Spirit River #133	891

IMPROVEMENT DISTRICTS

ID 17	11 699
ID 18	9 605
ID 23	5 837
ID 16	5 350
ID 22	4 250
ID 20	3 000
ID 21	2 979
ID 15	2 670
ID 19	1 757
ID 24	188

NADC TOTAL	243 292



Communities in excess of 200 population

provides a richness that more than offsets the small population size.

The 1984 population of northern Alberta was estimated at 243,292, or about one-third the number of people in Edmonton or Calgary. The two major cities of Grande Prairie and Fort McMurray accommodate one quarter of the population. Another quarter is distributed in 25 towns of between 1,000 and 5,000. The remaining population (47 per cent) is scattered throughout rural areas and communities of under 1,000 people.

Northern Alberta is characterized by a wide diversity of municipal structures including incorporated cities, towns, villages; counties, municipal districts and improvement districts; and unincorporated settlements or hamlets, Indian reserves and Metis settlements. Both the urban centres of northern Alberta and rural municipalities have local government structures, run by locally elected officials, with the authority to collect property taxes and the responsibility to provide such services as water supply, waste and garbage disposal, police and fire protection and ambulance service.

Improvement Districts (IDs) are unincorporated rural municipalities administered by Alberta Municipal Affairs, with heavy reliance on locally-elected Advisory Councils. Since 1980, the provincial government has encouraged self-government in Improvement Districts. Like municipalities, IDs are funded by local property taxes as well as provincial grants. They comprise the most significant land base in northern Alberta (94 per cent of the total) and contain one fifth of its population.

There are 68 Indian reserves in northern Alberta, 58 established under Treaty 8, and 10 under Treaty 6. In all, the reserves have a population estimated at 18,000 people.

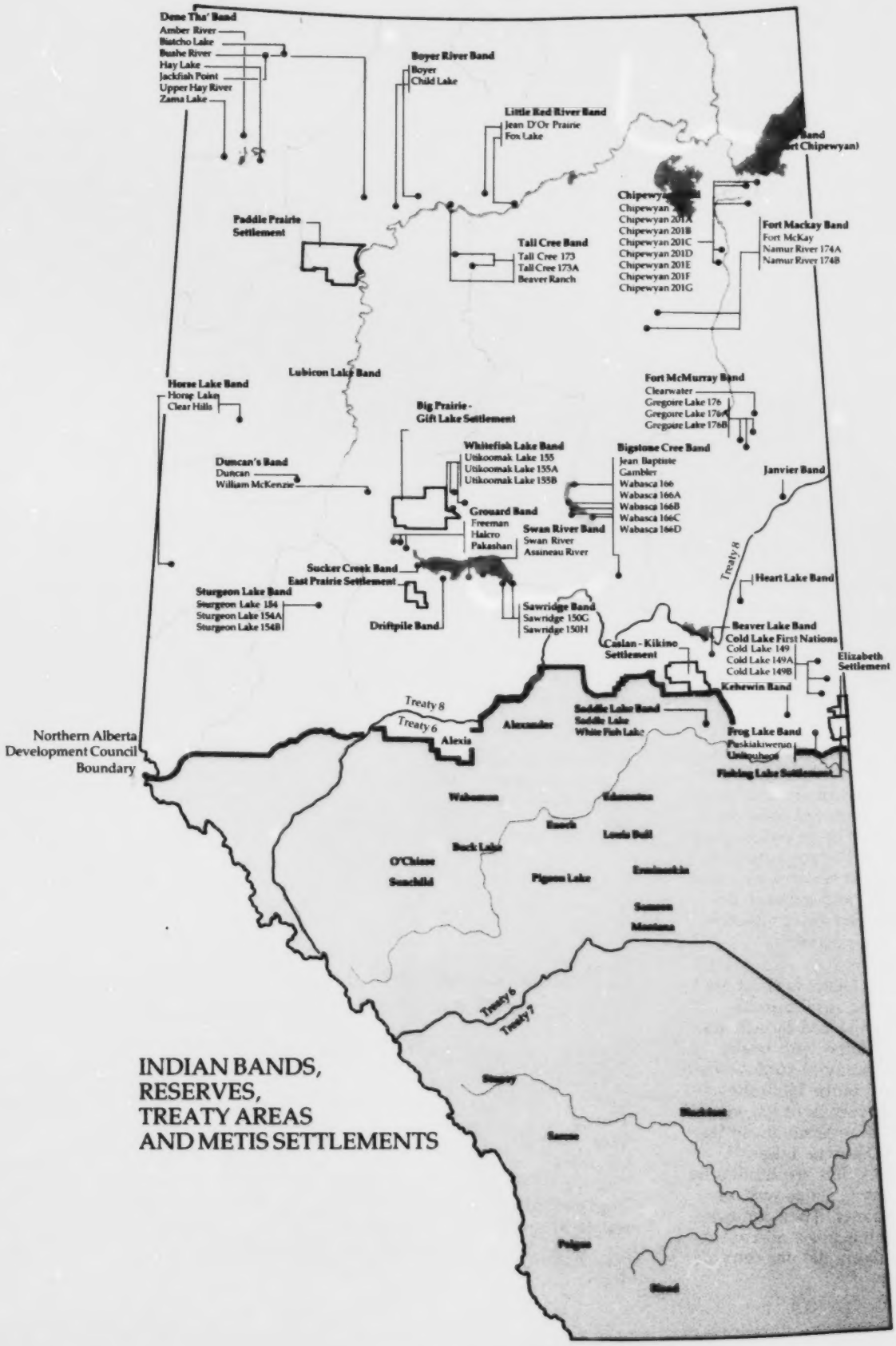
Eight Metis Settlements with a population of 4,000 are found in northern Alberta. Unique in Canada, these were established in 1938 after a provincial Royal Commission determined that Crown land should be set aside for Metis people. The Settlements have become increasingly self-sufficient over the years, with the Alberta Municipal Affairs providing administrative support. Recently, their move towards self-government has been aided by a provincial proposal to give the Settlements ownership of their lands.

Size of the Northern Alberta Development Council Area, by Type of Municipality

	Area (in hectares)	Per Cent of Total
Cities	4 079.00	0.01
Towns	23 483.88	0.06
Villages	1 931.46	0.01
Counties	1 376 347.55	3.50
Municipal districts	845 754.46	2.10
Improvement districts	36 921 060.00	93.70
Indian Reserves	243 531.41	0.60
TOTAL	39 416 287.76	100.00

Population of the Northern Alberta Development Council Area by Type of Municipality (1984)

	Number of Centres	Population	Per Cent of Total
Cities	2	59,763	24.7
Towns	24	69,328	28.5
Villages	16	6,563	2.7
Counties	3	24,366	10.0
Municipal Districts	5	16,567	6.8
Improvement Districts	10	47,335	19.4
Indian Reserves	68	19,370	8.0
TOTAL		243,292	100.0



INDIAN BANDS, RESERVES, TREATY AREAS AND METIS SETTLEMENTS

The North grew at an average annual rate of 2.5 per cent from 1971 to 1976, almost doubling to 4.1 per cent between 1976 and 1981.

While most of Alberta saw a significant population decrease in the mid 1980s due to the recession, this was not as true in northern Alberta. In some areas the population stabilized; in others it decreased slightly. Many communities, however, continued to grow; with the economic resurgence now strongly re-established, some continue to grow rapidly. Population forecasts indicate that through the year 2000, the northeast and northwest regions will be the fastest growing in Alberta with annual growth rates ranging from two to three per cent. This will result from increasing in-migration as economic growth expands.

Fort McMurray has maintained the fastest and longest rate of growth in Alberta. From 1971 to 1976, it grew at a rate of 17.4 per cent per year; from 1976 to 1981 at 13.4 per cent per year. Other fast growing communities include Grande Prairie, High Level, Beaverlodge, Slave Lake, Swan Hills, Bonnyville, Cold Lake, and Elk Point.

"People in Athabasca are proud of their town; culture is very important to them. They feel their performing arts centre is one of the best in the province."

The town of Athabasca

The city of Fort McMurray

CHARACTERISTICS OF NORTHERN RESIDENTS

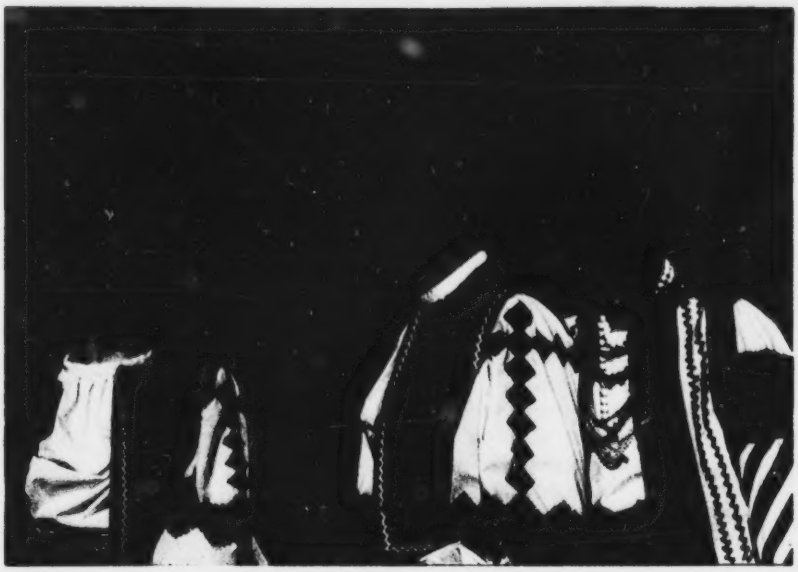
Ethnic Diversity

The people of northern Alberta are ethnically diverse. Those of western European extraction comprise two-thirds of the population. Of these, the majority are British followed by people of German and French descent. Notable populations of Ukrainian, Croatian and Mennonite people also exist.

Nearly 30,000 native Canadians, including status and non-status Indians and Metis, live in the North. The main linguistic background is Cree, with smaller numbers of Chipewyan, Slave and Beaver. This represents only twelve per cent of northern Alberta's population but 40 per cent of Alberta's native people.

Ethnic Diversity

	Per Cent of Total
British	39.9
German	13.2
Native	11.6
French	10.1
Ukrainian	8.6
Other	7.6
Scandinavian	3.6
Dutch	2.9
Polish	2.1
Italian	0.4
TOTAL	100.0



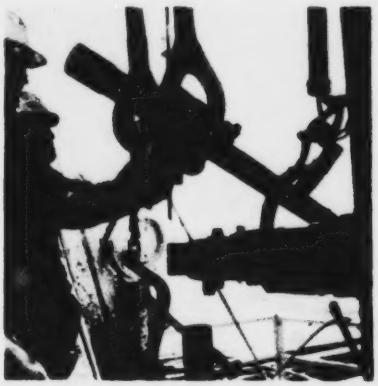
Ukrainian dancers

The Eleski Shrine south of Fort Vermilion

Diversity shows itself in the mobility of northerners. In 1981, 60 per cent of the population had moved at least once during the previous five years. Northern Alberta's mobility is comparable to that of the total Alberta population and reflects the rapid growth through in-migration characteristic of Alberta in the late 1970s. The majority of these highly mobile people are in the construction and service sectors. Of the 40 per cent of the population which had not moved during the previous five years, many had lived in their community for over twenty years. These residents are in the agricultural and forestry sectors, as well as in the service, public administration and defense sectors. Consequently most communities in northern Alberta are built around a core of stable, long term residents.

Mobility of Northern Residents 1976 - 1981

		Per Cent
Non-movers (same dwelling)		41.3
Movers (different dwelling)		58.7
Non-migrants (same census subdivision)	20.6	
Migrants (different census subdivision)	38.1	
TOTAL		100.0



Preparing to drill

Northern Alberta's Labor Force

The labor force in northern Alberta is heavily concentrated in the primary industries of agriculture, forestry, oil and gas, fishing and mining. Approximately one-third of the workforce is employed directly in these renewable and non-renewable resource industries. It is estimated that a further one-third of the labor force is employed in the service sector generated by this primary industry.

Northern Alberta is much more reliant on primary employment than is southern Alberta, and hence is very tied to shifts in the national and international economic situation.

Northern Albertans are almost as involved in the labor force as are

A significant portion of service sector employees are in jobs stimulated by primary industries' ▽

workers in southern Alberta, and are certainly ahead of Canadians in general. In 1984 the participation rate for northern Alberta was 69 per cent compared with 72 per cent for southern Alberta and 65 per cent for Canada.

Oil sands employee

Increasing employment in high technology occupations

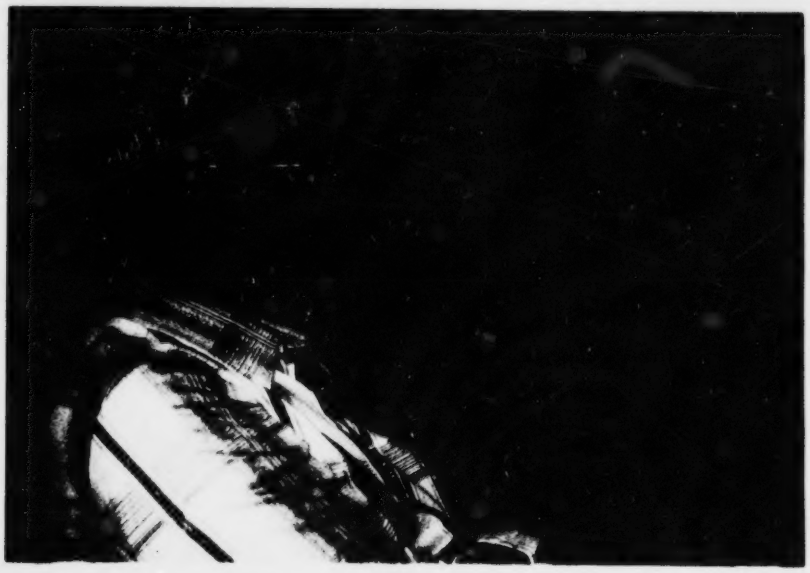
"If you want to make it happen, it'll happen; it's up to you."

Forestry, a major employer

Labor Force by Industry Northern Alberta, 1984

Industry Type	Number of Persons
Primary	13,000
Service	11,000
Trade	7,000
Construction	4,000
Transportation, Communications and Other Utilities	3,000
Public Administration and Defence	3,000
Manufacturing	3,000
Finance, Insurance and Real Estate	2,000
No Industry Stated	1,000
TOTAL	109,500

Each person represents 2000 people.

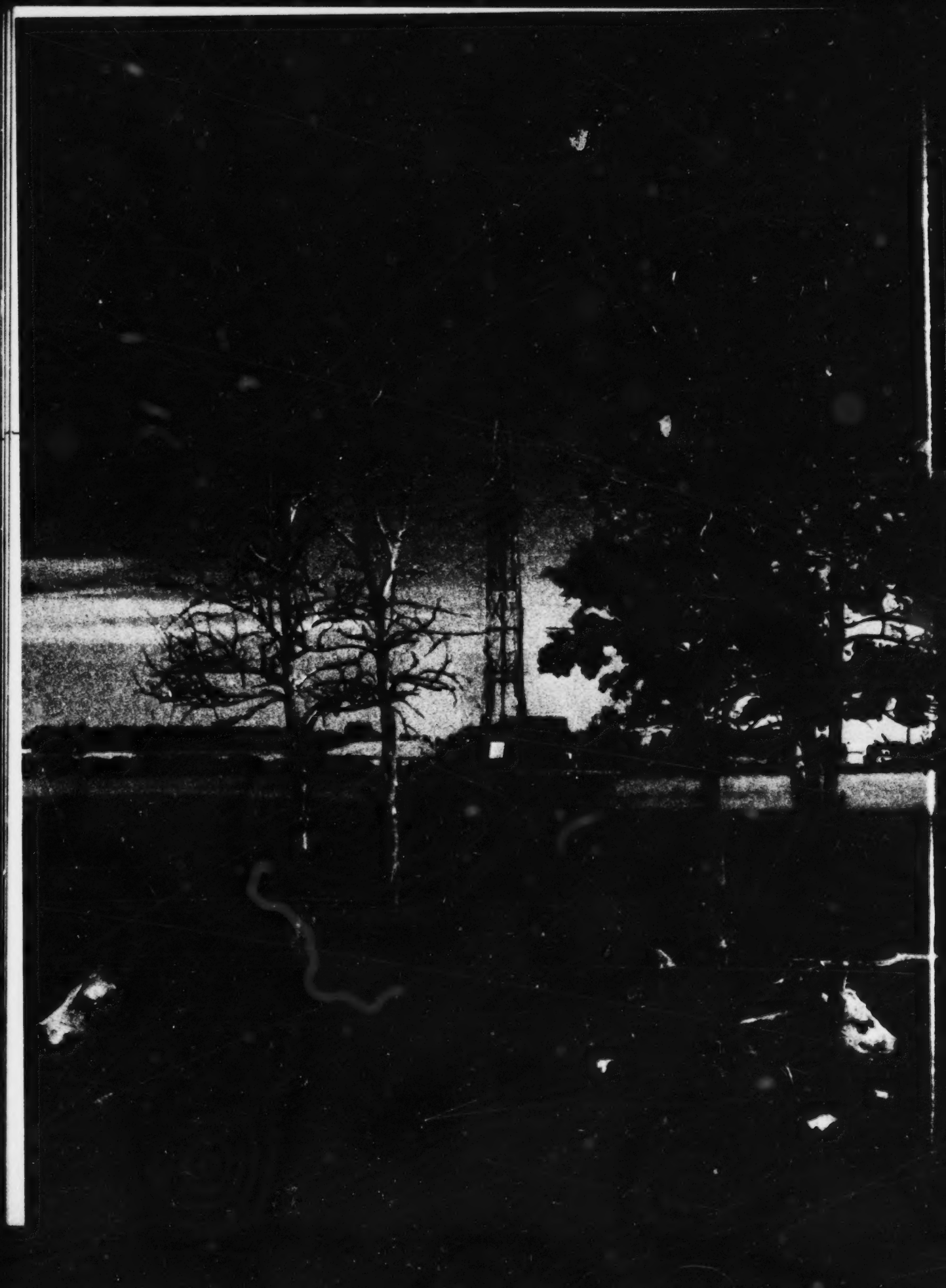


The North's native people

Northern fishing

Expansion of northern cities

Riding in Willmore Wilderness



THE ECONOMY

OVERVIEW

Northern Alberta's economy has been based on renewable resource development for the last 75 years. During the 1950s this changed dramatically with the exploration and development of non-renewable resources.

Like the rest of Canada, the North felt the positive economic environment of the 1970s and, as well, the effects of the recessionary period of the early 1980s. However, some areas of northern Alberta experienced little downturn because they relied on resources still in demand throughout this period. The North saw the turnaround in 1984-1985 and rebounded more strongly than many other regions.

The mainstays of the economy continue to be agriculture, forestry, oil and gas, oil sands and heavy oil. It is anticipated that growth in energy exports will continue to expand and will bring on-stream a number of new energy-related projects during the next decade. As northern Alberta moves into the 21st century, the outlook for renewable and non-renewable resource development is extremely positive. These industries will fire Alberta's economic engine for several decades into the future.

Transportation to market is a key to northern agriculture

Harvesting in the Peace

RENEWABLE RESOURCES

Agriculture

Two distinct areas of agricultural land predominate in northern Alberta. The first region, extending through Athabasca and eastwards to St. Paul, is the northernmost extent of Alberta's main agricultural belt, where top quality, arable land exists. This is a region of mixed farming, with a variety of operations – hog, dairy, grain and cattle. The main crops grown are canola and barley, with some wheat. New land is being cleared for agriculture in areas such as around Bonnyville.

The second major area is the Peace River country extending from Grande Prairie-Valleyview in the south to High Level-Fort Vermilion in the north. Here lies the most northerly agricultural land in Canada, and here the primary expansion of Alberta's agricultural land base is occurring. Soils vary from good to poor with some soils requiring special management practices because of their acidity, low organic matter content and erodibility. The growing season, while short, is intense

◁ *An economy based on both renewable and non-renewable resources*

with long hours of sunshine. High Level boasts that it has the world's most northerly grain elevators.

Agricultural expansion in northern Alberta is taking place within the areas already considered settled, although the possibility of making land available within some of the forest management areas is being considered. Between 1976 and 1981 approximately 137,000 acres of farmland was added annually to the farm inventory of northwestern Alberta.

Who are the northern farmers? The second and third generation farmers are very well established with large acreages and sophisticated equipment. The newer, or first generation, farmers face challenges in establishing themselves because of such costs as land clearing and equipment acquisition. For this reason, off-farm employment, usually in the forestry sector or the oil and gas industry, is often critical to help make ends meet.

A little known fact is that northern Alberta has nearly one-half of all farm units in Alberta. The farms are generally smaller than their southern counterparts; however, northern farms have a higher per cent of improved acreage.

The region produces top quality produce, winning numerous first prizes beginning at the Chicago Trade Fairs in the late 1920s and 1930s. Land suitable for horticultural crops such as corn, cucumbers, tomatoes and strawberries can be found. This is unheard of at similar latitudes in other parts of Canada.

Newly opened land in northwestern Alberta

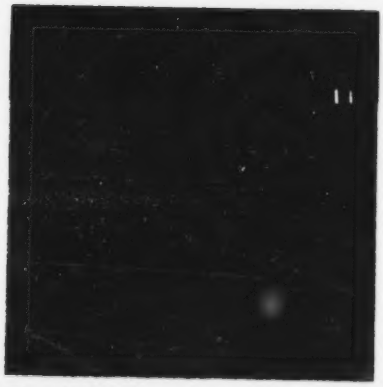
A winter farm scene

Number of Farms (1981)

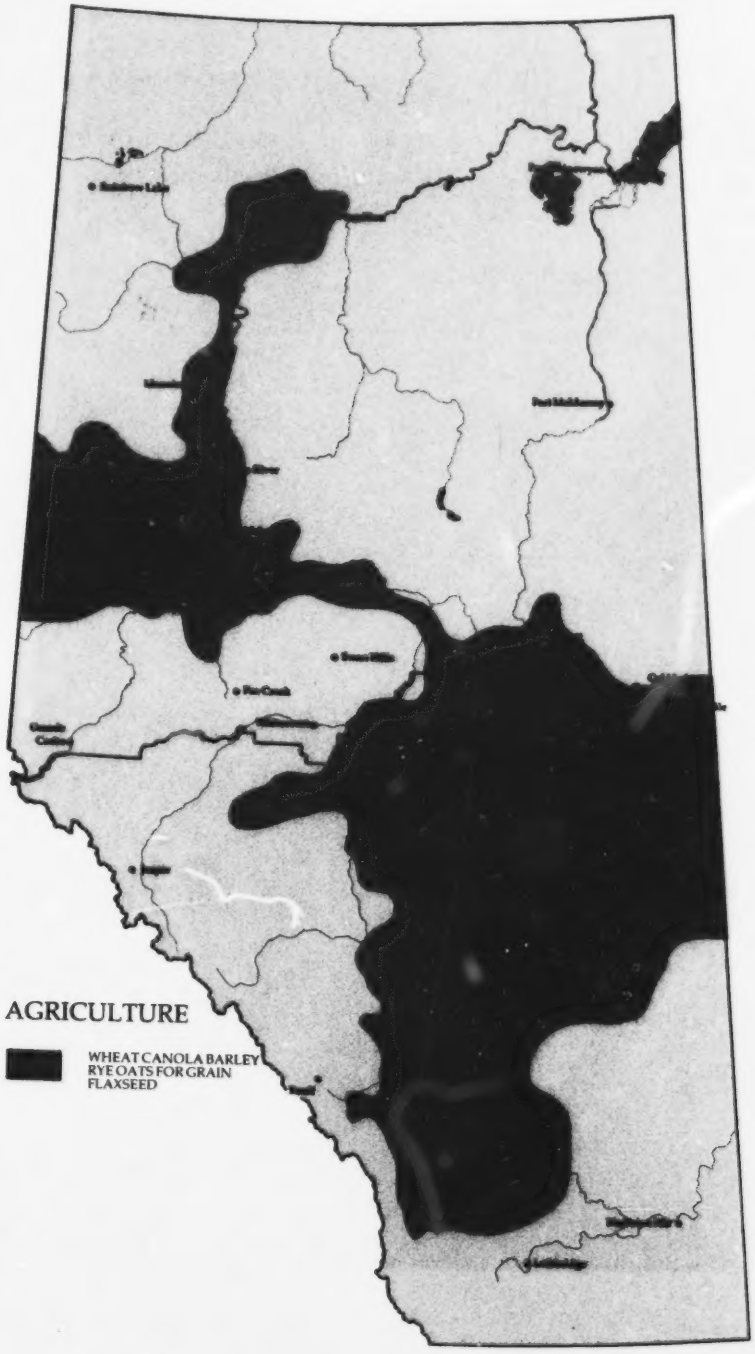
	Number of Farms	(%)	Total Farm Area (acres)	(%)	Total Improved (acres)	(%)	Total Improved (%)
North	24,598	(42)	13,852,231	(29)	9,802,427	(32)	71
South	33,458	(58)	33,365,939	(71)	21,148,715	(68)	63
Alberta	58,056	(100)	47,218,170	(100)	30,951,142	(100)	66

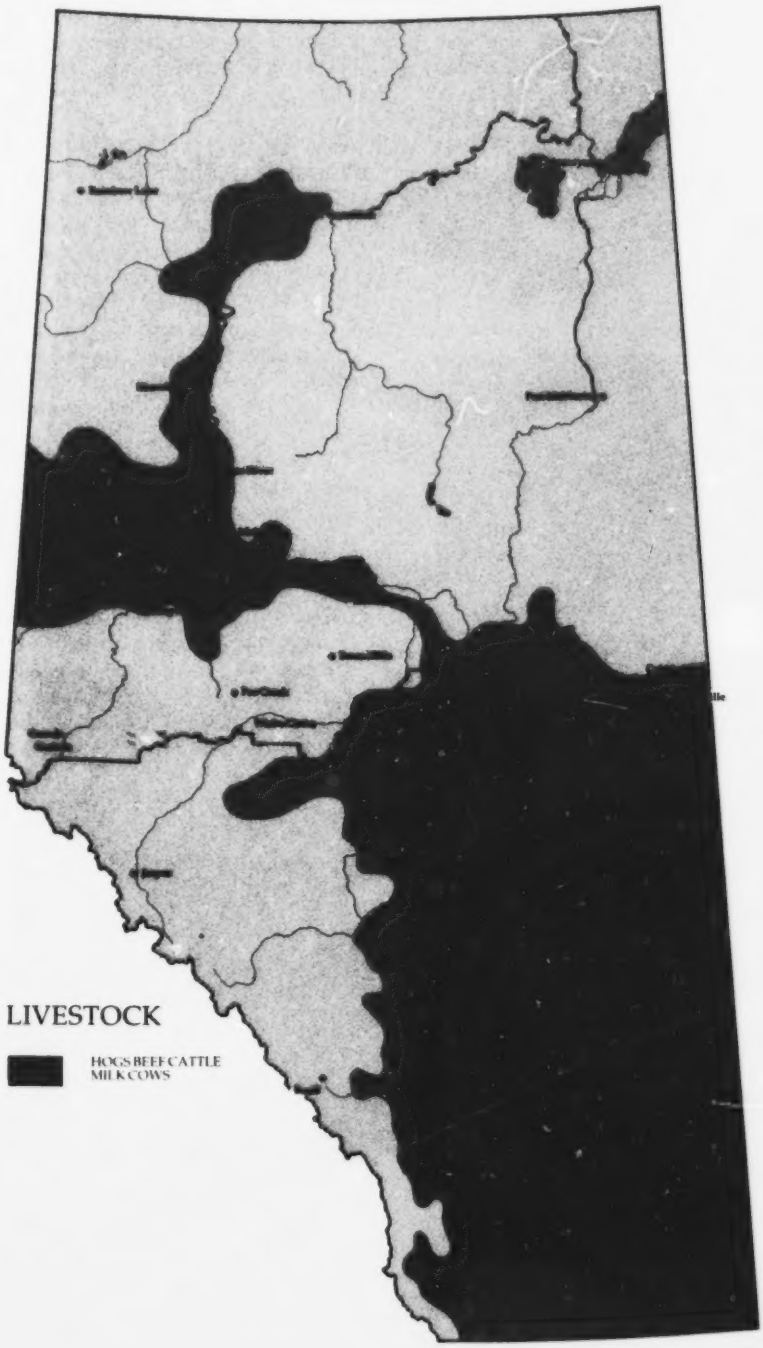
Barley is the most extensively planted crop, accounting for over 18 per cent of Alberta's barley acreage. The Peace River area produces 40 per cent of Canada's forage seed crops and 40 per cent of Alberta's canola. The area also accounts for significant portions of Alberta's oats, flaxseed and tame hay production. There is a developing livestock industry with about five per cent of Alberta's cattle located on mixed farms in the area.

Barley, a significant northern crop



Canola in bloom





Spring seeding

Herding livestock

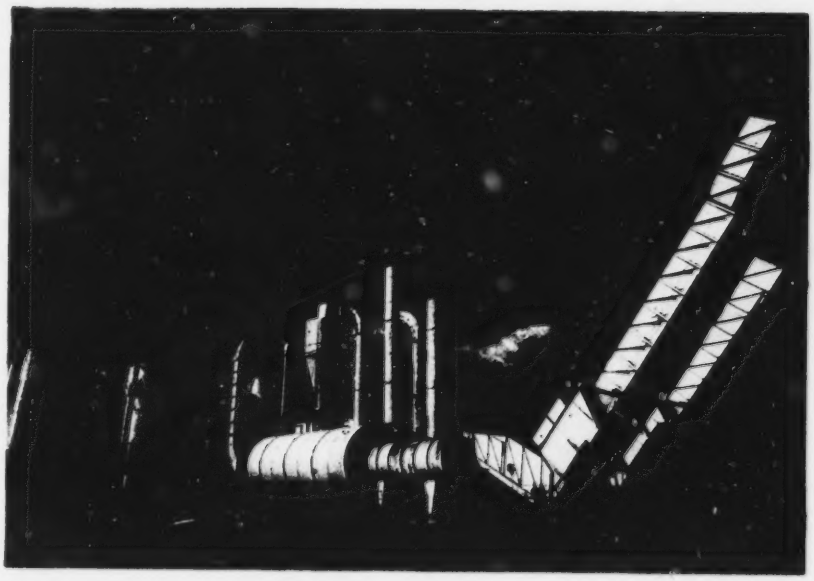
"Of all the northern regions of Canada, northern Alberta is the most viable."

Of note is the area's reputation for honey: Alberta produces over 30 per cent of Canada's honey supply while only having 10 per cent of the nation's beekeepers. More than one-half of this yield comes from the Peace River region, noted for some of the world's finest honey. In fact, Falher describes itself as the "honey capital of Canada". The Peace region's success at honey production is linked to its focus on such crops as clover and alfalfa, both desirable for beekeeping.

Some secondary processing of agricultural produce occurs in northern Alberta. This includes honey production, the processing of canola into products such as vegetable oil and livestock feed, and alfalfa pelleting. There are several alfalfa processing plants in northern Alberta including Falher, Wanham, and Mallaig near St. Paul. In northeastern Alberta, St. Paul produces about one-quarter of Alberta's production of cheddar cheese.

Agricultural research is prominent in northern Alberta. At federal stations located at Beaverlodge and Fort Vermilion, research continues on methods to manage the grey wooded soils of the region through modified farming practices. Research at the Beaverlodge station has resulted in significant breakthroughs in identifying fungi that cause root rot in canola, a crop of critical importance in the North. As well, substantial work has been done on alfalfa management. A significant development has been the breeding of a new, northern bee, as imported bees have been suspected of bringing in diseases. The new bee can over-winter well and flies earlier in the spring. Privately sponsored

Beekeeping



A major export is dehydrated alfalfa

research has resulted in improvements to the Saskatoon berry. As a result this indigenous fruit is now grown commercially and increasing acreage is being planted. A processing facility is planned for the Hythe area.

Forestry

Forestry is a major contributor to Canada's balance of trade surplus. With three quarters of Alberta's forests in the north, forestry plays a valuable role in the economy of northern Alberta. Forests also provide important watershed and recreational benefits. Of value to many northerners are the fish and wildlife habitats created by forests.

Northern Alberta contains some of the best timber growing sites in the province. The forests are an almost equal mix of coniferous and deciduous trees, with the exception of the Athabasca forest which is two-thirds coniferous. The aspen reserves in northern Alberta exceed that of any other province in Canada.

Principal commercial softwood species are jackpine, lodgepole pine and white spruce all of which are well suited for lumber, kraft pulp and plywood. Softwood forestry operations include a large pulp mill operating near Grande Prairie. Commercial saw mills are located in many communities across the North including High Level, Hines Creek, Grande Prairie, Enilda, Slave Lake, Nampa and Grande Cache. As well, there are many small sawmills producing materials for local use.

The principal commercial hardwood species is trembling aspen.

A familiar scene in northern Alberta

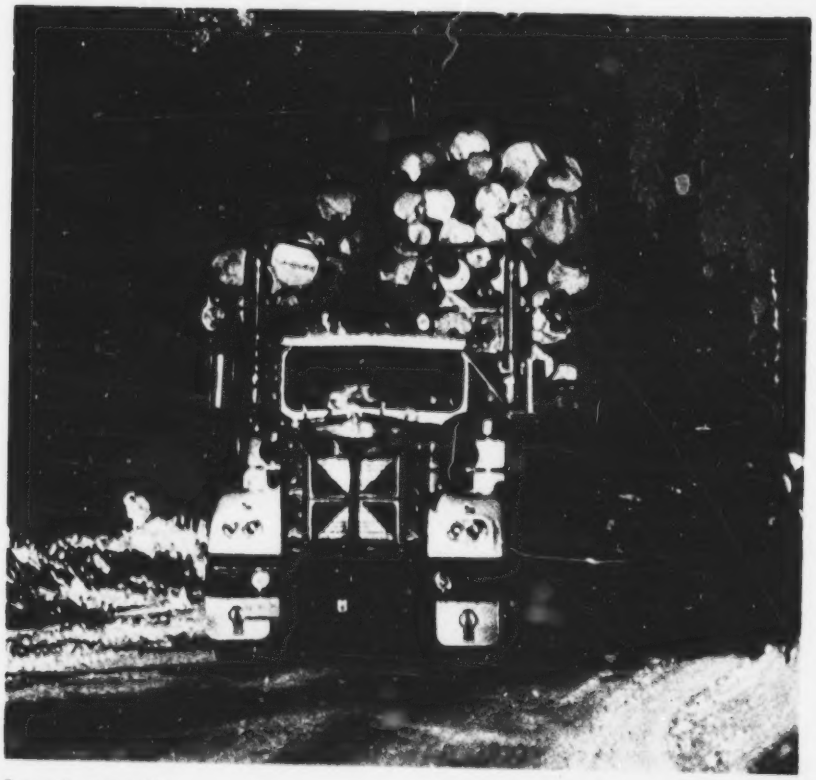
Although aspen grows quickly and is abundant in the North, it has a tendency to warp or twist when dried and thus is poorly suited for dimensional lumber. This coupled with several other constraints has resulted in aspen being less suitable than other woods for commercial use until recently. It is now being used with other woods as a pulp mix for paper production, and recent research indicates a potential for producing light weight coated paper from pulp derived from aspen. Significant research has developed methods for using aspen in waferboard and, more recently, in oriented strandboard. Two companies at Grande Prairie are piloting aspen use in their operations. As well a major wafer board plant located at Slave Lake uses aspen as its only feedstock. In summary, aspen offers tremendous opportunities for development in northern Alberta.

There is substantial timber available in the northern forests. Alberta Energy and Natural Resources establishes timber quotas through an annual allowable cut and on this basis commits timber reserves to logging companies. However, one-half of all the north-

ern forests' annual allowable cut of coniferous trees remains uncommitted, with the exception of the Grande Prairie Forest. All the forests have even greater potential for using the hardwood resource.

Further development of any of these forest resources may require the extension of transportation infrastructure, both road and rail. Development of the timber resource will require the integration of deciduous hardwood species into the manufacturing process as well. A final factor necessary to employ the remaining timber resource in northern Alberta is the need for sawmill modernization to enable processing of smaller diameter timber.

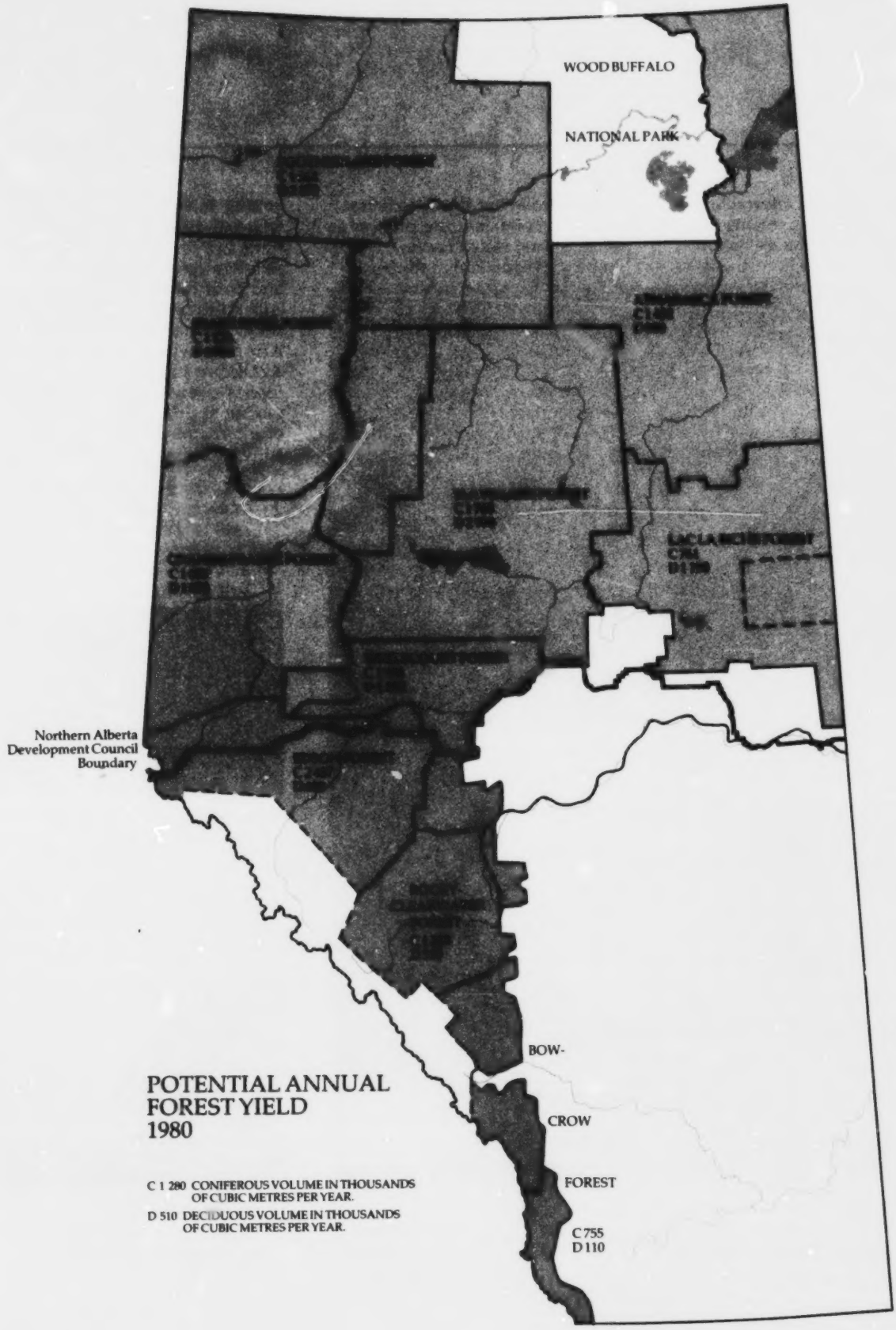
The "sustained yield policy" used in managing Alberta's forests has meant that the province will be able to continue harvesting timber at acceptable production rates well into the future. Nationally, Canada's forestry industry faces severe problems from overcutting and poor reforestation but in Alberta the outlook is very promising. By the 1990s, northern Alberta may very well experience significant production increases if forests elsewhere in Canada are unable to provide their domestic or international markets with sufficient lumber.



Logs in transit

Manufacturing dimensional lumber

Unloading pulp chips



POTENTIAL ANNUAL FOREST YIELD 1980

C 1 280 CONIFEROUS VOLUME IN THOUSANDS OF CUBIC METRES PER YEAR.

D 510 DECIDUOUS VOLUME IN THOUSANDS OF CUBIC METRES PER YEAR.

Fish and Wildlife

Fish and wildlife play a significant role in the northern economy through commercial and recreational fishing, trapping and hunting.

Commercial fishermen catch approximately three-quarters of the Alberta production: three and one-half million pounds annually. Whitefish account for more than one-half of the catch in weight, and three-quarters in economic return.

The most significant lakes are Lesser Slave, Utikuma and Cold Lakes, Lac La Biche and Lake Athabasca. Although 90 per cent of all fish caught come from one-quarter of the lakes commercially fished there is little potential for expansion. Lake Athabasca is the only lake with potential for greater commercial fishing. Improved accessibility to other lakes will reduce pressure on existing ones, but will not result in expanded production, at least in the whitefish catch. The potential for "rough fish", suitable for such uses as animal feed, however, is just barely being tapped. Fish packing plants are located in Cold Lake, Lac La Biche, Faust, Fort Chipewyan and Joussard.

Recreational fishermen in Alberta remove as many fish as the commercial fisheries. Fly-in fishing is quickly developing in the northeast region where activity has doubled in the last few years. It is estimated that northern Alberta accounts for 80 per cent of Alberta's recreational fishing. For example, six of Alberta's seven "trophy fishing" lakes are in the North. Fish management to protect the interests of both commercial and recreational users is therefore becoming more important. Management policies include fish stocking and rearing, fishing regulations, and land and water management.

A commercial fisherman

The Cold Lake Fish Hatchery is one outcome of this fish rearing policy. This hatchery, which will provide northern Alberta with its first major hatchery tailor-made for the North, produces walleye for the sport fisherman.

While trapping is not one of the North's major economic activities, there are 2,000 registered trappers in northern Alberta – approximately 80 per cent of all of Alberta's trappers. Approximately one-half are native or Metis and one-quarter are farmers. The industry is significant to many of the native and Metis people for whom it is an essential part of their traditional lifestyle.

The principal species, in terms of numbers and value, are beaver, muskrat, squirrel, lynx and coyote. Unlike the fishing industry which harvests near-maximum catches in many northern lakes, trapping has potential for increased productivity. The only factor which might affect this is the expansion of lands dedicated to agriculture, oil and gas development, and forestry.

Recreational hunting of moose, elk, deer, black bear and waterfowl is increasingly significant. The guiding industry has good potential, and the future may see such developments as game farms and wildlife ranches, perhaps on Indian reserves or Metis settlements.

Hydro Electric Resources

Historically, all electric power in northern Alberta has been generated with non-renewable resources: coal, oil and gas. Recent interest has focused on developing the north's vast hydro potential. Many sites have been identified but two of the most important are a dam on the Peace River at Dunvegan, and another on the Slave River south of the Northwest Territories boundary.

It is estimated that the Slave River dam could generate a million kilowatt hours annually, about one-third of all power generated by Alberta utilities during 1984. Hydro potential, for both export and in-province markets, is substantial. The timing of these and other hydro-electric projects is linked to a number of factors, including demand for electrical energy.

NON-RENEWABLE RESOURCES

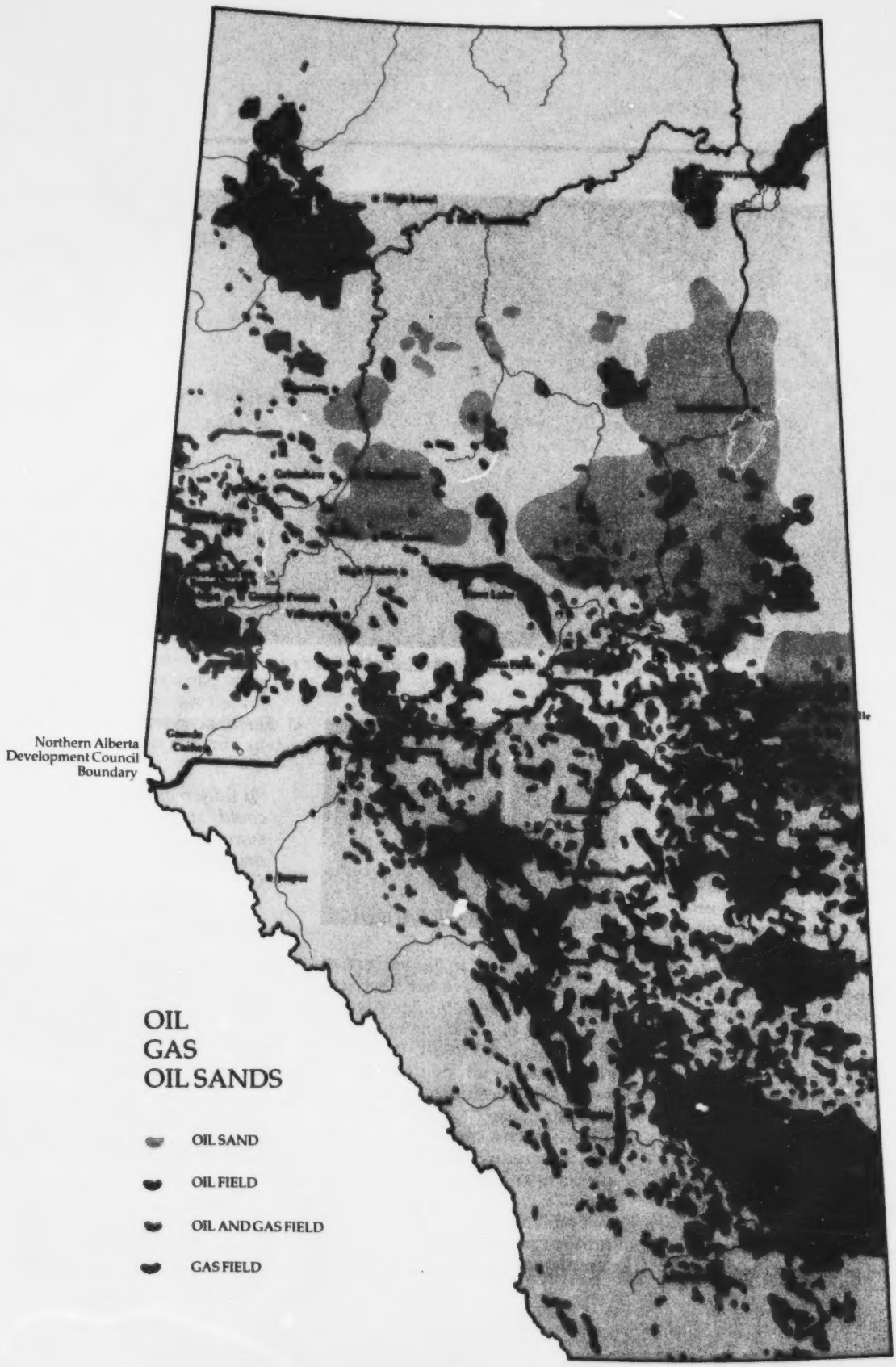
Oil and Gas

The oil and gas industry is a significant employer in the North, with the largest conventional oil and natural gas field in Alberta at Rainbow Lake. Fox Creek is the biggest producing gas field in Canada. Other large producing natural gas fields are the Elmworth field located southwest of Grande Prairie, and the Primrose field in the northeast.

The North is the center of Alberta's oil exploration activity

An iron horse

Oil field servicing, a major source of employment


Northern Alberta
Development Council
Boundary
OIL
GAS
OIL SANDS
OIL SAND
OIL FIELD
OIL AND GAS FIELD
GAS FIELD

The major conventional oil fields in northern Alberta extend mainly in a north-south line in the centre of the NADC region, and include Judy Creek, Swan Hills, Mitsue, Utikuma, and Red Earth Creek. The Utikuma - Red Earth Creek area, extending to Peerless Lake and Wabasca, received intense exploration and drilling activity in the mid 1980s. Currently, 70 per cent of all oil and gas wells drilled in Alberta are drilled in the North. The North also has about one-third of Alberta's gas processing plants, its sulphur producing gas plants, and its oil and gas fields.

While conventional oil and gas exploration and development are major factors in the economy of northern Alberta, it is the tar sands that are of greatest long term significance – because of the quantities of oil available, the scale of the operation and the number of employees.

Oil sands deposits underlie 60 000 square kilometres (23,000 square miles) of northern and eastern Alberta. The importance and potential of these relatively untapped oil reserves have increased dramatically in recent years as supplies of conventional crude oil declined, and with the desire of provincial and federal governments to lessen Canadian dependence on oil imports. More sophisticated recovery techniques have made exploitation of this oil source technologically feasible.

The four major oil sands deposits – Athabasca, Cold Lake, Wabasca and Peace River – together hold an estimated 200 billion cubic metres of bitumen, the heavy, viscous oil present in the oil sands.

The immense task of mining the tar sands

◁ *The Syncrude plant at Fort McMurray*

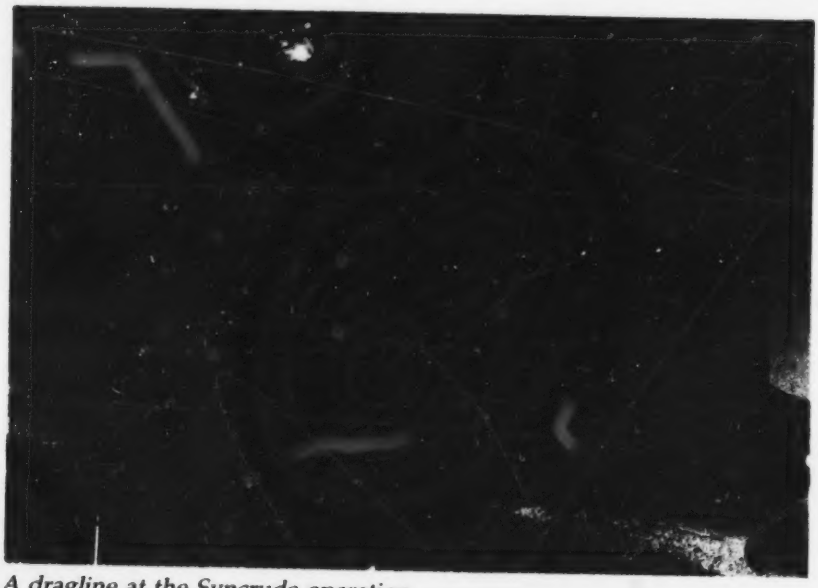
To date, only 10 to 20 per cent of these deposits have been recognized as recoverable. Approximately 5.2 billion cubic metres in the Athabasca deposit, the largest and richest of all the deposits, have been identified as recoverable. This deposit is currently being mined by two companies, Suncor and Syncrude, and processed in plants near Fort McMurray. These plants have been expanded considerably in recent years and two or three new plants are being contemplated.

"If fully realized, the oil sands could, at present rate of consumption, supply the world's needs for almost 10 years, Canada's requirements for 270 years and Alberta's for 1800 years."

Gas processing in the northern forest

The oil sands extraction process involves mining the bitumen deposits with bucket-wheel excavators or giant draglines. The sand and crude bitumen are then separated using a hot-water flotation process developed by the Alberta Research Council, and the resulting raw bitumen is then upgraded to a high-grade, synthetic crude oil suitable for refining.

In the Cold Lake, Peace River and Wabasca deposits there are more than 30 experimental "in-situ" recovery plants in operation, several of which are nearing commercial production. "In-situ" plants use underground techniques because of the thickness of other materials between the surface and the oil sands (the overburden). For example, steam can be injected to extract the oil. Some of the main projects involving in-situ extraction are indicated in the chart.



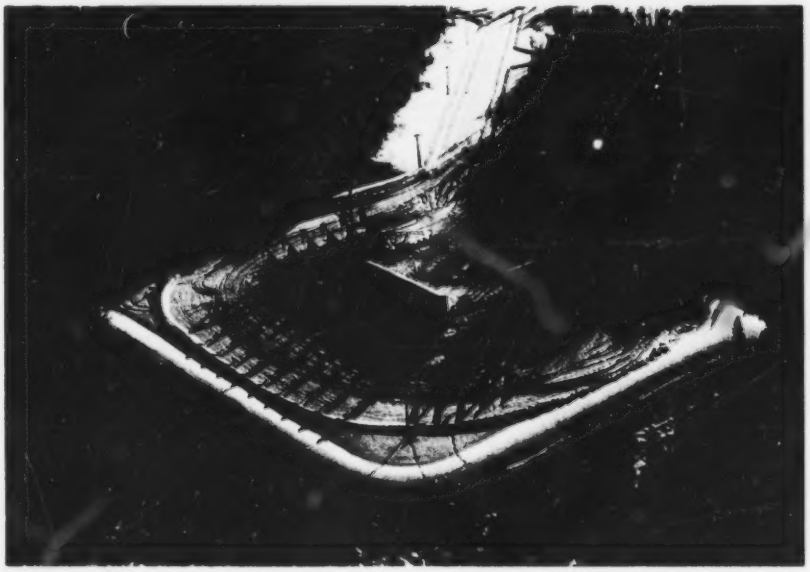
A dragline at the Syncrude operation

A bucket wheel excavator at Suncor

A Partial Listing of In-Situ Projects in Northern Alberta

Amoco Canada Petroleum Co. Ltd.	- Heavy oil project at Elk Point
BP Canada Ltd./Petro Canada Resources	- Oil sands plant at Wolf Lake near Bonnyville
Dome Petroleum Ltd.	- Heavy oil pilot project in the Primrose Lake Air Weapons Range - Heavy oil recovery project in the Lindbergh field near Elk Point
Esso Resources Canada Inc.	- Phased expansion of a bitumen production plant near Cold Lake
Gulf Canada Resources Inc.	- Heavy oil experimental project near Wabasca/Desmarais
Murphy Oil Ltd.	- Expansion of pilot projects near Lindbergh
Shell Canada Resources Inc.	- Expansion of a heavy oil experimental project near Peace River
Suncor Inc.	- Steam stimulation plant at Fort Kent near Bonnyville

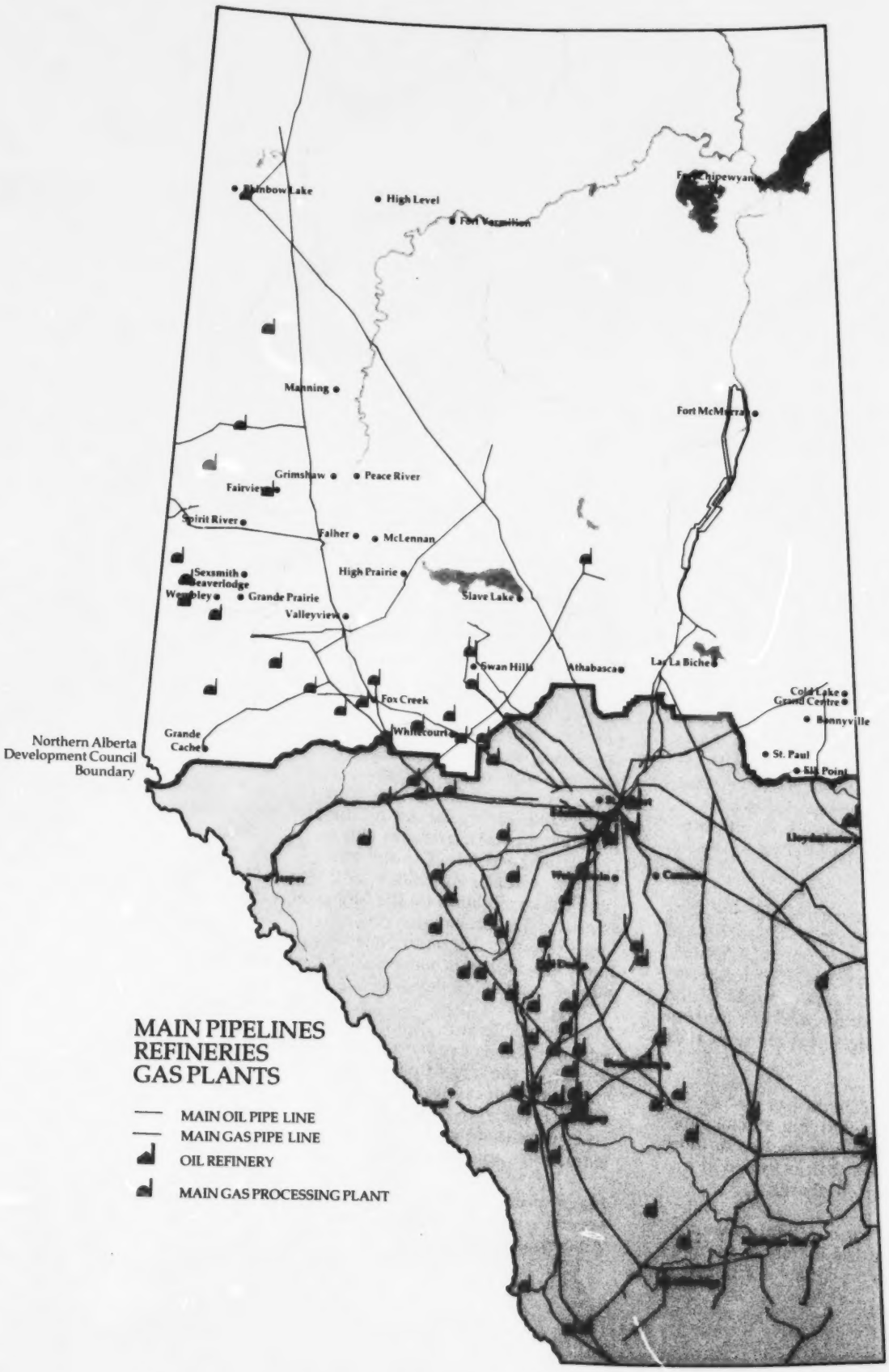
A number of the in-situ projects are jointly cost-shared between the Alberta Oil Sands Technology and Research Authority (AOSTRA) and private industry. In addition to the cost-shared in-situ projects, AOSTRA is constructing a major underground test facility north of Fort McMurray to demonstrate and test the "shaft and tunnel access concept". By constructing tunnels to the underground oil sand reserve, various in-situ techniques can be tested for extracting bitumen from the oil sands.



Steam injection and production units at Wolf Lake

Pipeline construction near Bonnyville

The final factor in oil and gas production is transportation to market. The main oil and gas pipelines in northern Alberta run from the northeast and northwest sectors of the province toward Edmonton. Esso Canada Resources and InterProvincial Pipelines have recently completed a pipeline from Norman Wells, Northwest Territories to the existing pipeline at Zama. If the Beaufort Sea hydro-carbon developments proceed, at least two major pipelines from northern Canada will be connected to the existing pipelines in northern Alberta.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McLennan
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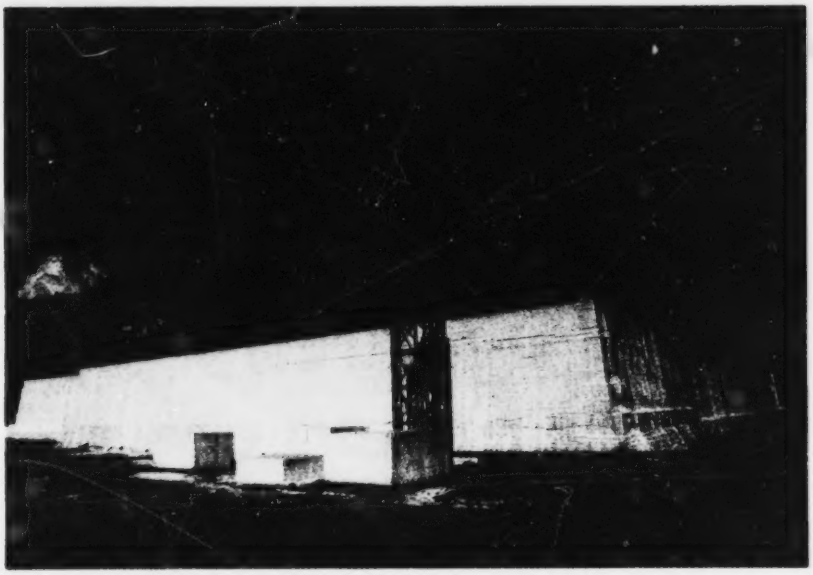
Beaverlodge
Wembley
Grande Prairie
High Prairie
Slave Lake
Valleyview
Swan Hills
Athabasca
Fox Creek
Whitecourt
Grande Cache
Cold Lake
Grand Centre
Bonnyville
St. Paul
Elk Point
Northern Alberta Development Council Boundary
MAIN PIPELINES
REFINERIES
GAS PLANTS
MAIN OIL PIPE LINE
MAIN GAS PIPE LINE
OIL REFINERY
MAIN GAS PROCESSING PLANT

Minerals

Northern Alberta has a wide range of other mineral resources, primarily industrial, or non-metallic minerals. Alberta is a world scale producer of sulphur; nearly three-quarters of Alberta mineral production is accounted for by this product. It is one of the few minerals with a high enough value to bear transportation costs for the export market. Most of the sulphur occurs as a product of natural gas processing or comes from synthetic crude oil extraction from the oil sands. About one-quarter of the province's sulphur is produced in northern Alberta, but the potential exists to produce up to one-half of the province's total.



Sulphur, a co-product of gas production, a valuable export product

Other potentially economic minerals include: peatmoss, salt, iron ore, dimensional stone and such heavy metals as vanadium. Although few of these minerals have been extensively developed, most have been explored in a preliminary way. No significant development is forecast in the near future.

There are extensive deposits of peatmoss in northern Alberta. Estimates indicate that 34 000 square kilometres (13,000 square miles) exist. Most commercial use is for agriculture and horticulture with the larger part of the peat exported.

Northern Alberta has vast salt deposits underlying much of the region in beds 60 metres or more in thickness. Salt is mined at a plant near Lindbergh.

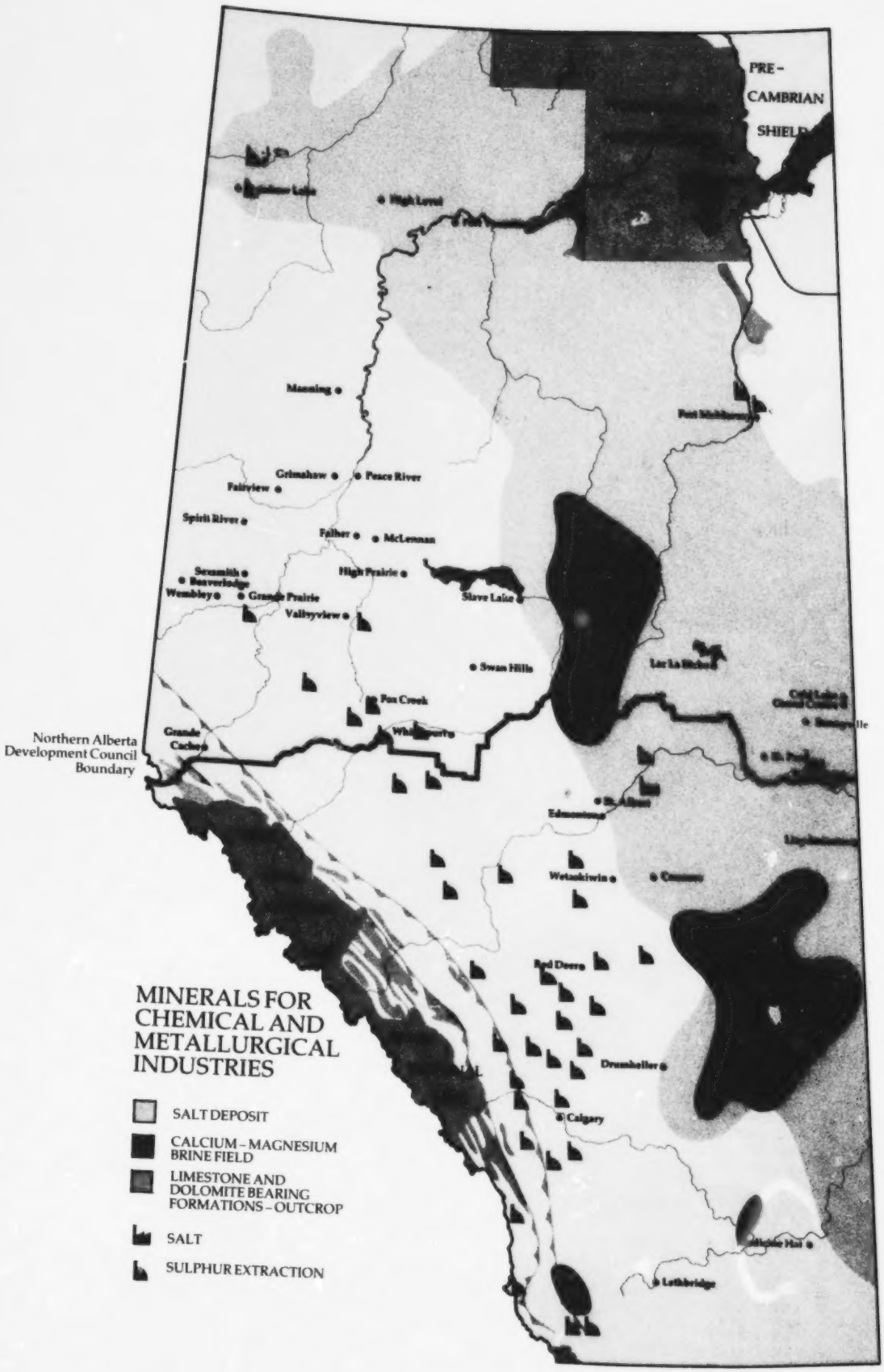
Potential for major mineral production exists mainly in the Precambrian Shield area of northeastern Alberta, and in the iron ore deposits of the Clear Hills area in northwestern Alberta. The Precambrian Shield provides a favorable geological setting for metallic minerals; uranium showings have been found in the area adjacent to Lake Athabasca, and uranium exploration on the Shield is active. The Shield also has large amounts of granite; near Fort Chipewyan are some excellent dimensional stone deposits.

The Clear Hills iron deposits (180 million tonnes of proven reserves) constitute the largest potential source of iron ore in western Canada. Their development awaits an economically viable process of extraction and smelting.

Magnesium-rich brines exist in several subsurface reservoirs in Alberta, including one to the east of Lesser Slave Lake. These brines have magnesium concentrations eight to 10 times that of seawater, the main North American source of this metal. There may be economic potential for magnesium extraction through an electrolytic process.

The Athabasca Oil Sands are rich in several heavy metals including vanadium, nickel, titanium and zirconium. These concentrate during oil sands processing and may be recoverable.

Other potentially economic minerals include limestone, gypsum, and silica sand deposits near Peace River.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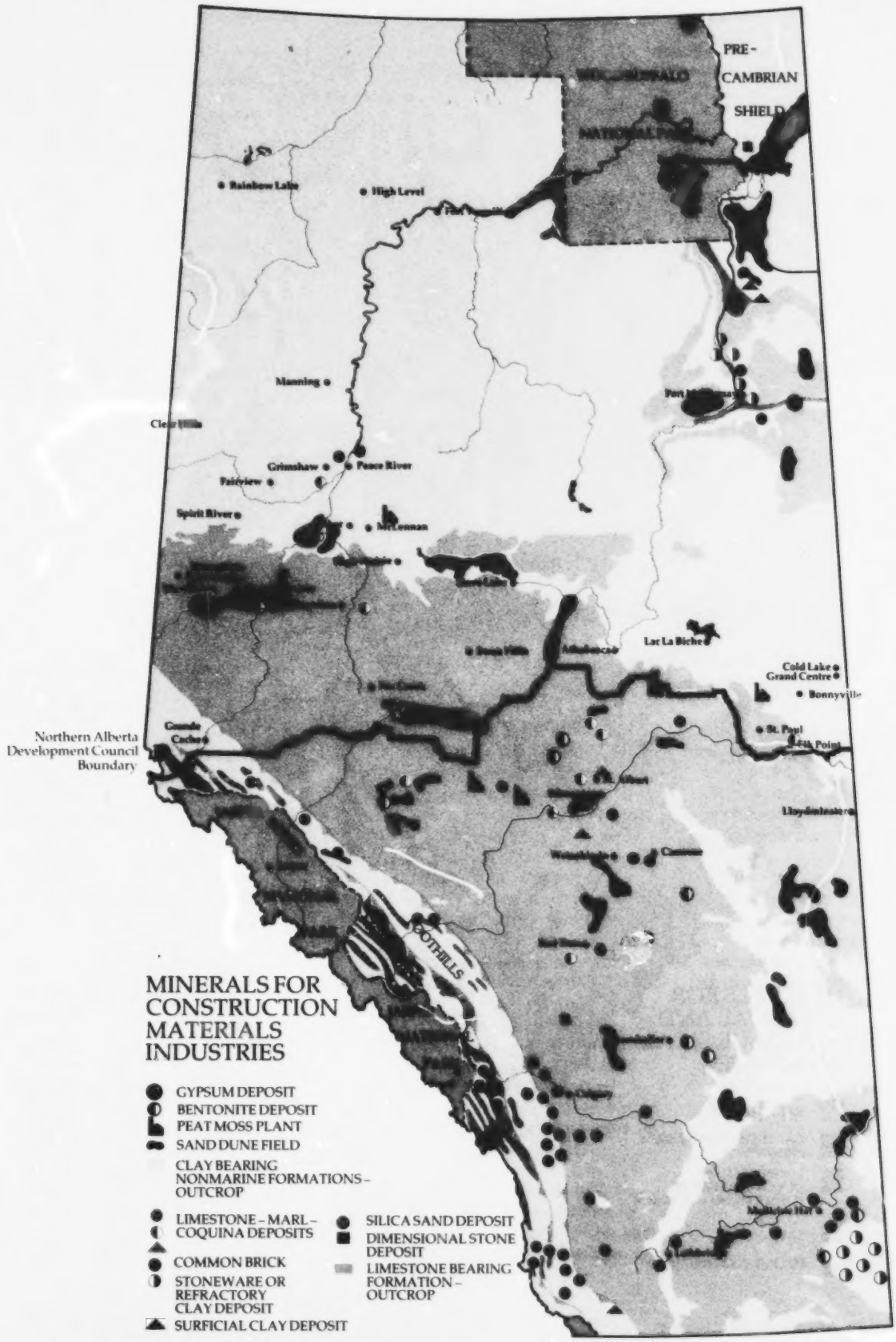
Grande Prairie
High Prairie
Slave Lake
Valleyview
Swan Hills
Fox Creek
Grande Cache
Northern Alberta Development Council Boundary
Edmonton
Wetaskiwin
Red Deer
Drumheller
Calgary
Lethbridge
MINERALS FOR CHEMICAL AND METALLURGICAL INDUSTRIES
SALT DEPOSIT
CALCIUM - MAGNESIUM BRINE FIELD
LIMESTONE AND DOLOMITE BEARING FORMATIONS - OUTCROP
SALT
SULPHUR EXTRACTION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Cold Lake
Grand Centre
Bonnyville
St. Paul
Northern Alberta
Development Council
Boundary
FOOTHILLS
MINERALS FOR
CONSTRUCTION
MATERIALS
INDUSTRIES
GYPSUM DEPOSIT
BENTONITE DEPOSIT
PEAT MOSS PLANT
SAND DUNE FIELD
CLAY BEARING
NONMARINE FORMATIONS –
OUTCROP
LIMESTONE – MARL –
COQUINA DEPOSITS
COMMON BRICK
STONEWARE OR
REFRACTORY
CLAY DEPOSIT
SURFICIAL CLAY DEPOSIT
SILICA SAND DEPOSIT
DIMENSIONAL STONE
DEPOSIT
LIMESTONE BEARING
FORMATION –
OUTCROP

PRE-
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SHIELD
Rainbow Lake
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Cold Lake
Grand Centre
Bonnyville
Fox Creek
Whitecourt
St. Paul
St. Albert
Edmonton
Lloydminster
Wetaskiwin
Camrose
Red Deer
Drumheller
Calgary
Medicine Hat
Lethbridge
Northern Alberta
Development Council
Boundary
FOOTHILLS
MOUNTAINS
METALLIC
MINERALS
VANADIUM, NICKEL,
TITANIUM AND ZIRCONIUM (Oil Sands Area)
CALCIUM – MAGNESIUM BRINES
IRON FORMATION
URANIUM (Prospective Area)

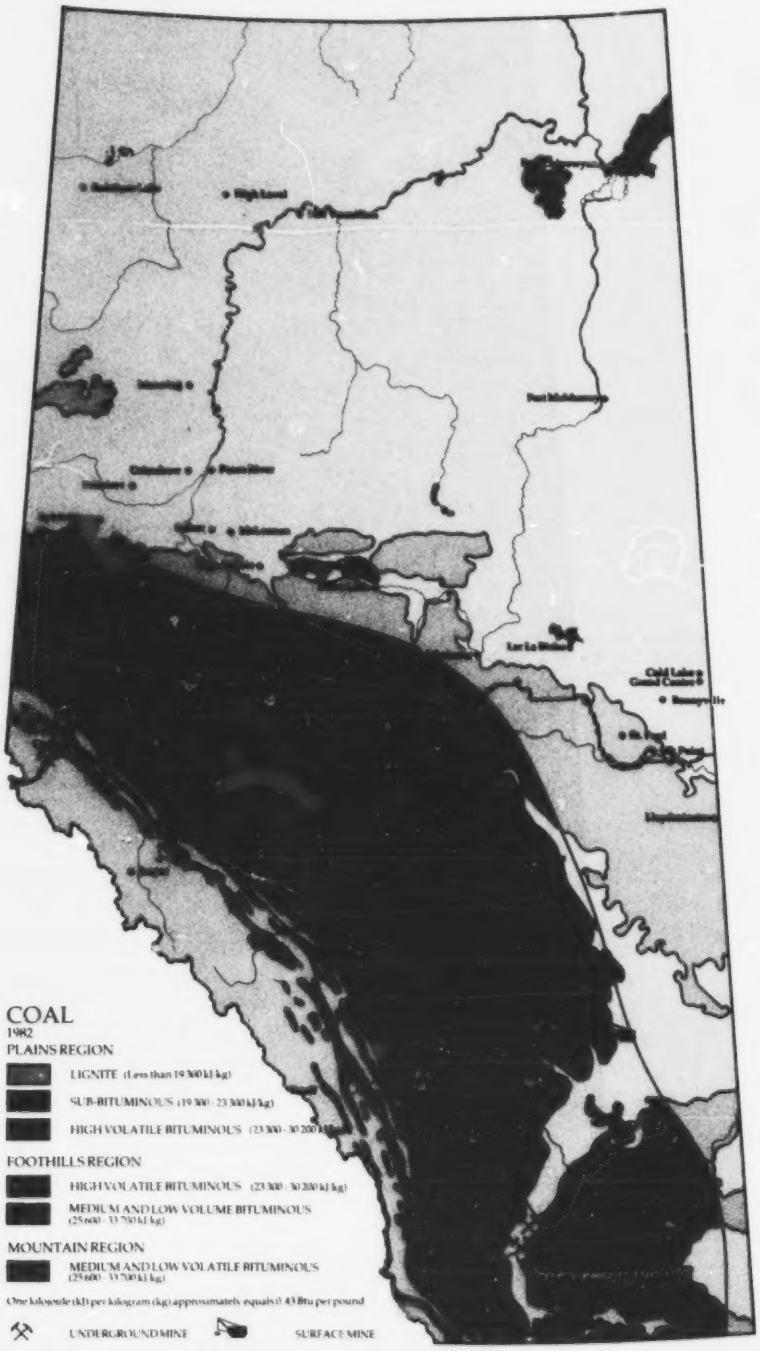
Coal

Various grades of coal are found in northern Alberta. These deposits vary in recoverability depending on the seam thickness and the amount of overburden. Except for metallurgical coal deposits in the southwest, the deposits are suitable for thermal use or perhaps for coal gasification.

The largest bituminous coal mine in Canada is the Smoky River mine near Grande Cache where metallurgical coal is exported primarily to the Japanese market. Decreasing sales to Japan have had a severe impact on the economy although the Company has secured new contracts in Eastern Canada and abroad. This is the only operating coal mine in northern Alberta.

There is potential for the development of coal for thermal power in three locations: Lesser Slave Lake, Judy Creek and Fox Creek. These sites will be developed when justified by demand.

The Smoky River coal mine near Grande Cache


COAL
1982
PLAINS REGION
LIGNITE (Less than 19 300 kJ/kg)
SUB-BITUMINOUS (19 300 - 23 300 kJ/kg)
HIGH VOLATILE BITUMINOUS (23 300 - 30 200 kJ/kg)
FOOTHILLS REGION
HIGH VOLATILE BITUMINOUS (23 300 - 30 200 kJ/kg)
MEDIUM AND LOW VOLUME BITUMINOUS (25 600 - 33 700 kJ/kg)
MOUNTAIN REGION
MEDIUM AND LOW VOLATILE BITUMINOUS (25 600 - 33 700 kJ/kg)
One kilojoule (kJ) per kilogram (kg) approximately equals 0.43 Btu per pound
UNDERGROUND MINE
SURFACE MINE

RETAIL AND SERVICE TRADE

Retail and service trade in northern Alberta resulted in $1.5 billion in revenues in 1982, 8 per cent of the provincial total of $17.6 billion. This was spread over 2,000 businesses located in the cities, towns and villages of the North.

Fort McMurray and Grande Prairie have the widest range of retail and service businesses. These cities and larger towns such as Peace River and Whitecourt have establishments in each of the major categories, as well as stores specializing in such items as health food, delicatessen products, furs, books, flowers or musical instruments. Such retail services contribute to an urbane environment and make it possible for the North to maintain a measure of self-sufficiency.

Towns such as Slave Lake, Bonnyville or Grand Cache also have a wide range of business establishments, and communities which service surrounding agricultural areas have diversified retail and service industries. St. Paul, for example, with a smaller population than that of Whitecourt, has more retail and service trade because of its role as a market centre for the surrounding area.

"You don't have to rough it in the north – unless of course you want to "

A modern shopping mall

Urban life

Expanding service facilities

Remote centres like developing resource communities and Indian reserves have a retail and service industry closely tied to the population level. No matter how remote, all communities support some business establishments. As the North continues to grow and prosper, opportunities for the retail and service industry will continue to expand.

MANUFACTURING

Forest products manufacturing industries, including pulp and paper, employed more than 3,000 employees, or half the manufacturing labor force in 1981. This is the major export manufacturing industry in northern Alberta.

Retail and Service Trade, Selected Communities Northern Alberta, 1982

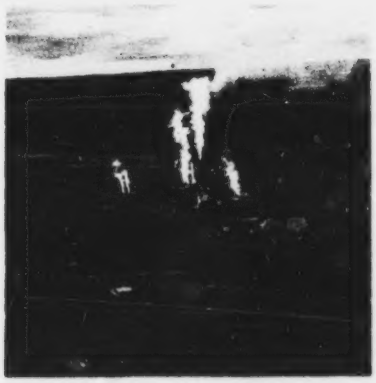
Community	Number of Establishments	Receipts, 1982
Grande Prairie	277	$$$$$$$$$$$$$$$$$$$$
Fort McMurray	202	$$$$$$$$$$$$$$$$
Peace River	104	$$$$$
St. Paul	87	$$$$
Slave Lake	54	$$$
Whitecourt	77	$$$
Grand Centre	77	$$$
Bonnyville	80	$$
High Prairie	67	$$
Lac La Biche	57	$$
Fairview	56	$$
High Level	35	$$
Grimshaw	35	$$
Grande Cache	33	$$
Valleyview	39	$
Swan Hills	18	$
Cold Lake	16	$

Each $ represents $20,000,000

Manufacturing in Northern Alberta, 1981

Type of Industry	Number of Establishments	Labor Force
Wood	38	
Food and Beverage	39	
Pulp, Paper and Allied	1	
Metal Fabricating	14	
Printing and Publishing	26	
Non-Metallic Mineral Products	21	
Machinery	2	
Petroleum and Coal Products	n/k	
Transportation Equipment	3	
Furniture and Fixture	9	
Chemical	2	
Clothing and Textile	2	
Rubber and Plastics	1	
Miscellaneous	3	
TOTAL	161	6260

Each figure represents 100 people



Fall at the Procter and Gamble pulp mill near Grande Prairie

The agricultural processing industry produces some products for export out of the region, including canola oil, dehydrated alfalfa, dressed meat, refined honey, and cheese. The 1981 labor force in this field included about 800 employees, although not all were involved in export-related activity.

The oil and gas industry is considered to be an extractive one; thus, despite its significance, it does not provide extensive manufacturing employment.

Firms in the metal fabricating and machinery industries are small-scale operations serving local requirements. As the North develops, so will opportunities for these smaller manufacturers.

Metal fabricating

Construction workers, new hospital, Cold Lake

CONSTRUCTION

Construction is an important activity in northern Alberta. In 1981, almost 13,000 northerners were involved in construction-related employment. This figure actually underrepresents the degree of activity in the North since some projects hire people from outside the region on a temporary or rotational shift basis. In fact, northern Alberta accounts for more than one-third of Alberta's construction. With continuing activity in the energy sector, this situation is expected to continue and grow.

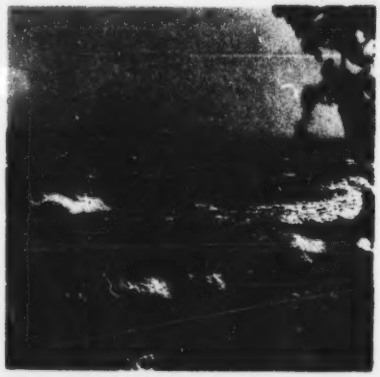
TOURISM

Northern Alberta falls into several different zones as set out by the Tourism Industry Association of Alberta. A wealth of tourism opportunities and resources exist in each of these zones, including outdoor recreation, historic, cultural, ethnic and urban attractions.

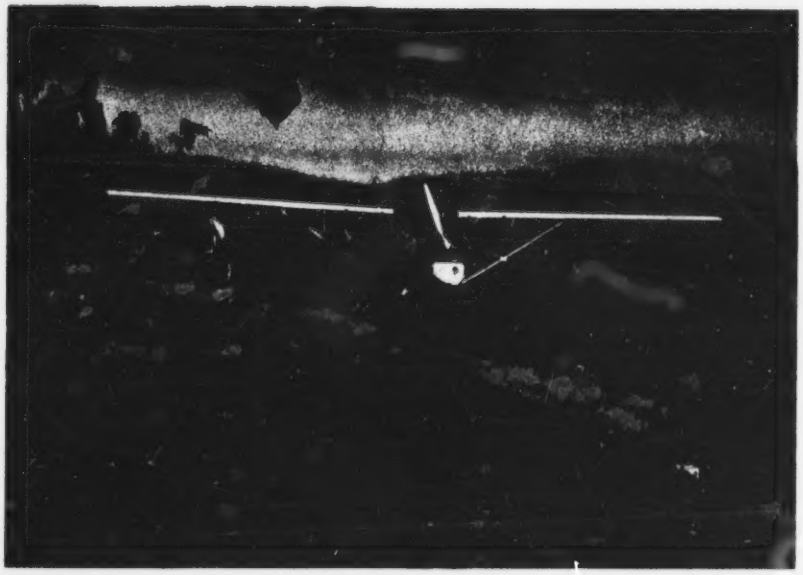
Northern Alberta receives about 10 per cent of the $2 billion annual tourism receipts in Alberta. The largest present source of tourists is from within Alberta. However, the number of visitors from outside the province is increasing. For example, a substantial number of Europeans are now visiting Wood Buffalo Park for such activities as park tours, canoe and raft trips on the Slave River, or dog sled trips in winter. The Alaska highway draws Canadian and American visitors. Guiding and outfitting American and European hunters is now a fairly important activity.

The North has a tremendous range of high-quality recreation resources, including excellent fishing lakes of which some are suitable for swimming, canoeing and kayaking rivers, wildlife, heritage areas, and cultural and urban amenities. A joint government and industry priority over the next few years will be to develop the relatively untapped tourism potential which exists in northern Alberta.

Each region has its own unique resources to offer visitors, ranging from the sands of Lesser Slave Lake and the fishing of the "Lakeland", to hiking or trailriding in Willmore Wilderness Park, to heritage days in the agricultural areas. These activities are all available to northerners, and are described in greater detail in the "Recreation" section.



◁ *Water-based activities attract visitors to the North* ▽



The Province is now focusing on developing northern Alberta's tourist potential through such activities as improved marketing, education and training in the hospitality industry, increased local awareness of tourism opportunities, and physical development of tourist facilities. Two important components of northern tourism development are continued park development and lake enhancement activities.

OTHER EMPLOYMENT

Other sources of employment in the North include public administration and defense, representing eight per cent of the northern labor force. The Canadian Forces Base at Cold Lake is a major factor in the economy of the Cold Lake/Grand Centre/Bonnyville area and is expected to become an even more important employer with the location of CF-18 fighter planes.

A significant project is the construction of a hazardous waste treatment facility approximately 12 kilometres from the town of Swan Hills. This plant will be unique in North America in that hazardous wastes such as PCBs will be treated, rather than simply disposed of, through such techniques as high-temperature incineration.

Modern technology

RCAF monument at Grand Centre

"Winter is the busiest time of year in the north; you learn how to work in cold temperatures, in forestry, oil exploration, construction."

NORTHERN INFRASTRUCTURE

TRANSPORTATION

Historically, the development of northern Alberta's economy has been tied to the transportation system: river transport opened up the area for fur trading; railways made agricultural development possible; and now, major improvements in highway and air transport are allowing more extensive development of the energy and forest resource base.

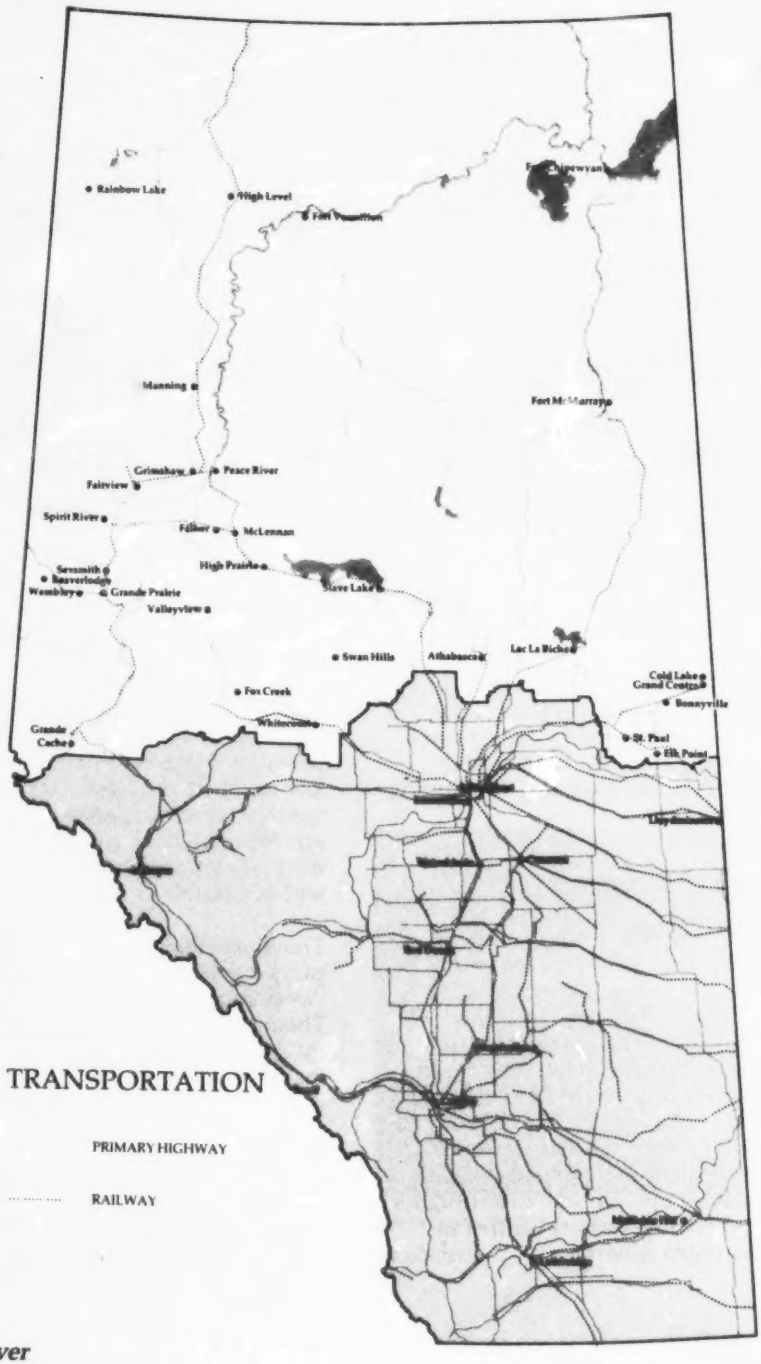
Highways

Since the 1970s, there has been significant construction of new highways and improvements to existing roads in northern Alberta. Between 1981 and 1984, approximately 5 500 kilometres (3,450 miles) of highway have either been built or upgraded. This activity has resulted in improvements to northern regions. There are now three main north-south routes, and construction of lateral connectors continues. A new year-round road between Grande Cache and Grande Prairie is complete.

In addition, in areas of active oil exploration, such as north of Lesser Slave Lake, many roads are built by the oil and gas industry. Similarly, timber reserves are criss-crossed by logging roads.

Railways

All railways in northern Alberta are operated by Canadian National Railway (CNR). Areas served



Industrial and commercial facilities in Peace River

include the Peace River region, Lac La Biche/St. Paul, Fort McMurray and Grande Cache; there is also a link to the Pine Point lead-zinc mines in the Northwest Territories. This last is an important factor in the economic development of the Mackenzie Valley and Arctic Coast. Large volumes of northbound equipment and material pass through the railhead at Hay River for barge shipment along the Mackenzie River to the Beaufort Sea.

Waterways

The Mackenzie River system, ice-free only four months of the year, flows 1 770 kilometres north from Great Slave Lake to the Beaufort Sea. It is used to ship community supplies and construction materials for resource projects. Between 100 000 and 200 000 tonnes are shipped annually with increases expected as the Beaufort Sea is developed. A large portion of the freight moving on the Mackenzie is trans-shipped by rail or truck through Alberta to Hay River, the main staging area for barging operations.

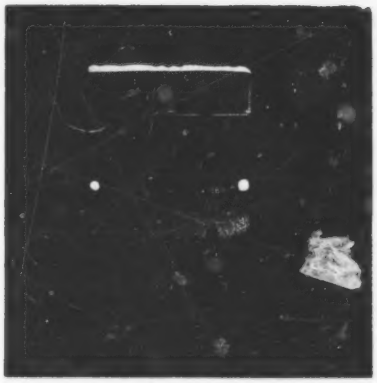
Air Transportation

Air transport is an essential component of life in the North. Northerners use airplanes more frequently than do southerners, especially as a means of daily transportation. Many remote communities would be inaccessible for part or all of the year were it not for scheduled and charter plane services. Several major airlines operate scheduled flights connecting various centres in northern Alberta.

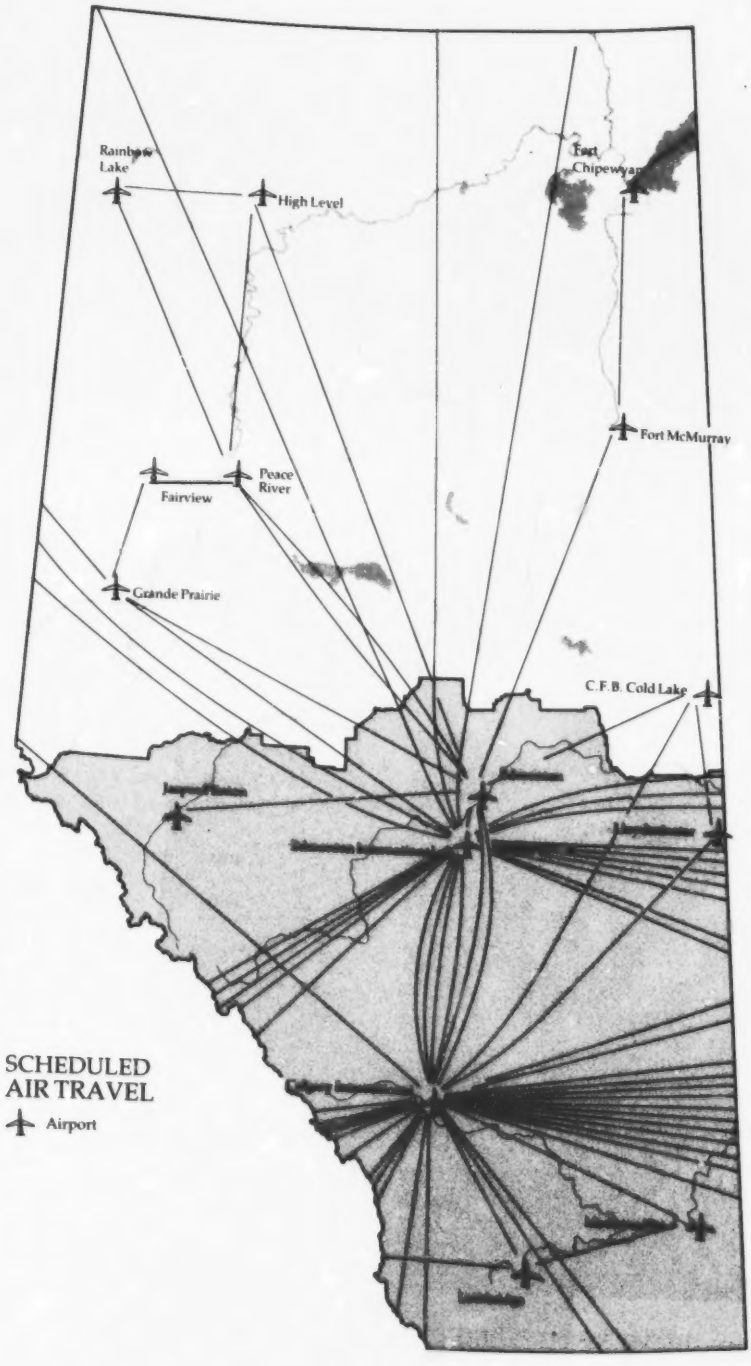
Railways are a major means of transport

Almost more significant than the regular air schedules are the unscheduled and chartered flights linking communities. Most communities have landing strips. More than 25 centres have modern paved and lighted runways, allowing 24-hour access. An air medivac system operates in northern Alberta, allowing emergency medical evacuations from centres without hospitals.

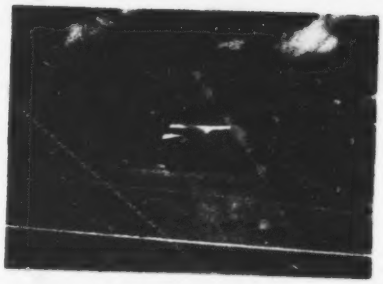
Transportation infrastructure still plays a critical role in the economic development of northern Alberta. The transportation problems faced by Alberta when competing for markets on an international basis affect the North even more intensely than the south: distance from ocean ports; distance from large population centres; relatively large internal distances between consumption and production centres; and a relatively sparse population all affect the ability to compete. However, northerners have become used to the cost imposed by distance, and this cost lessens as improvements in transportation continue to be made.



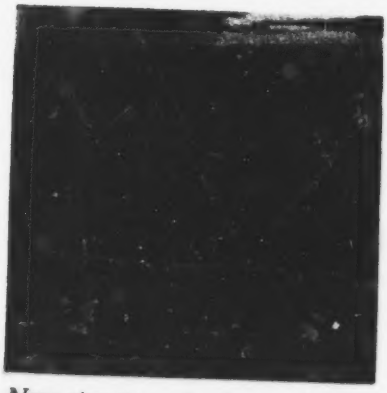
The highway network is substantial



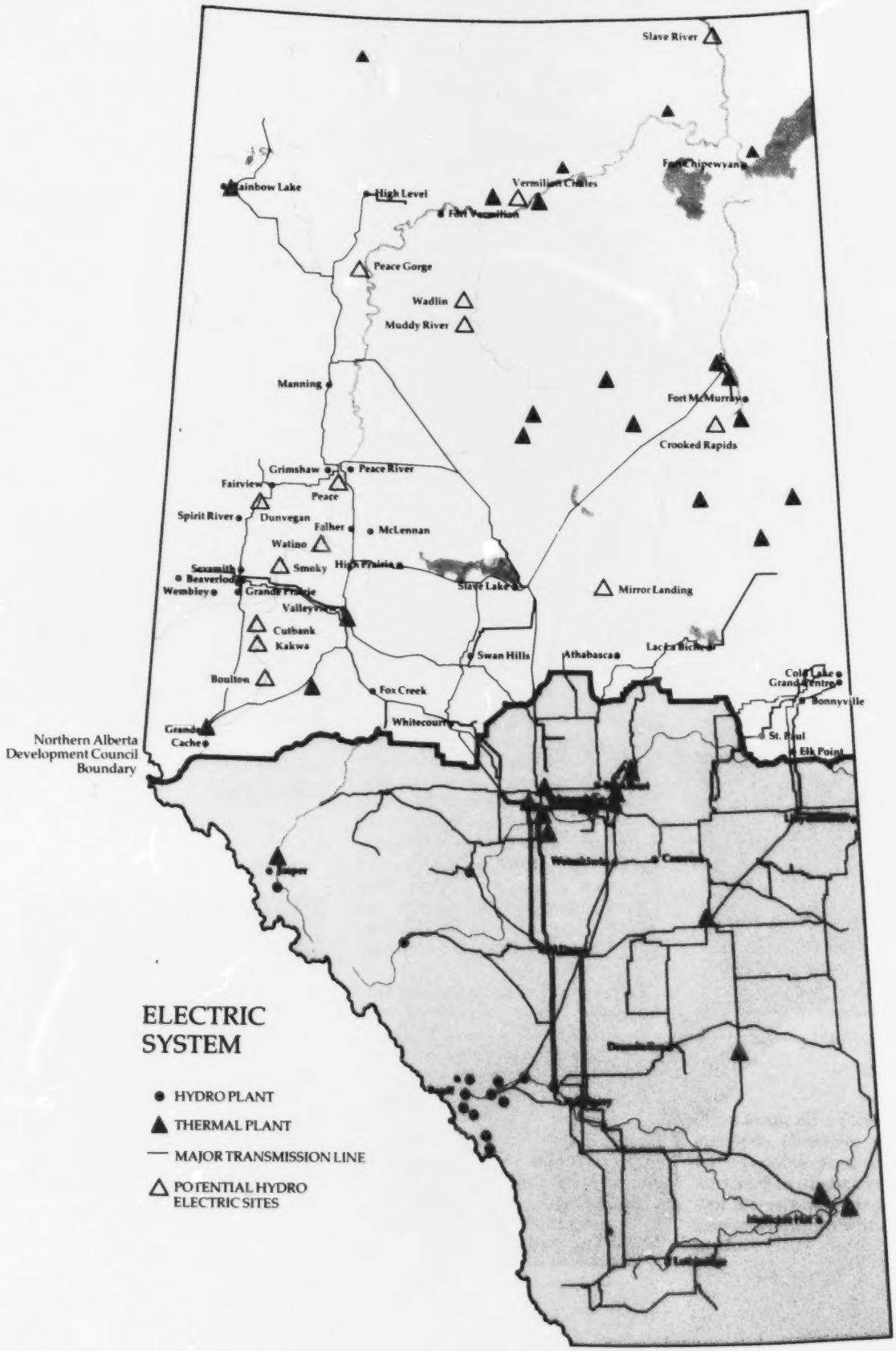
"There is a myth that the north is isolated; this just isn't borne out by facts such as daily air service...."



Modern airports exist in most large communities



New structures in the northern landscape


Slave River
Rainbow Lake
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Vermilion Chutes
Fort Vermilion
Peace Gorge
Wadlin
Muddy River
Manning
Fort McMurray
Crooked Rapids
Grimshaw
Peace River
Fairview
Peace
Spirit River
Dunvegan
Falher
McLennan
Watino
Smoky
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Mirror Landing
Valleyview
Cutbank
Kakwa
Swan Hills
Athabasca
Boulton
Fox Creek
Cold Lake
Grand Centre
Bonnyville
Whitecourt
St. Paul
Elk Point
Northern Alberta Development Council Boundary
ELECTRIC SYSTEM
HYDRO PLANT
THERMAL PLANT
MAJOR TRANSMISSION LINE
POTENTIAL HYDRO ELECTRIC SITES

COMMUNITY INFRA-STRUCTURE

Municipal Services

One of the myths about northern Alberta is that its population has few of the amenities of southern communities. The majority of the North's population lives in communities that compare favorably with those elsewhere in North America.

Virtually all cities, towns and villages in northern Alberta have modern utilities such as piped and treated water, sewage disposal, natural gas, power and telephones. Nevertheless, the distances separating communities and the sparseness of the population do increase the difficulty of financing and providing services to small settlements. Some communities may lack piped water or sewer service. In particular, native settlements often use local well water or haul from a nearby source.

Industrial Services

Most communities with a population in excess of 500 have land available or designated for industrial development; however, some of this land may not be serviced yet.

Housing

Accommodation in northern Alberta, like community infrastructure, reflects the contrasts of northern development. The suburbs of the large centres have housing

Servicing industrial sites

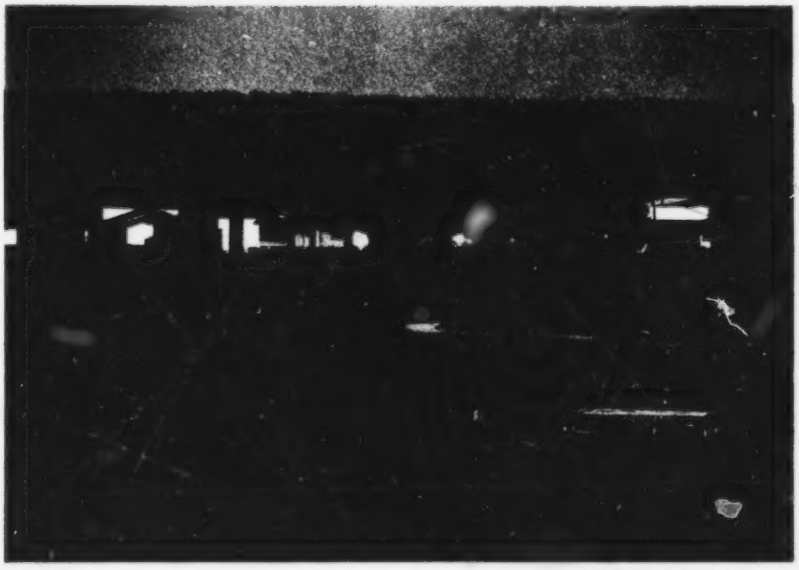
New housing development

comparable to prestigious areas elsewhere in Canada; at the same time, some remote communities need improved housing in order to meet an acceptable health and safety standard. Such provincial housing programs as the Rural and Native Housing Program, the Rural Emergency Home Program, the Metis Housing Program, and the Rural Home Assistance Home Program are attempts at rectifying this situation.

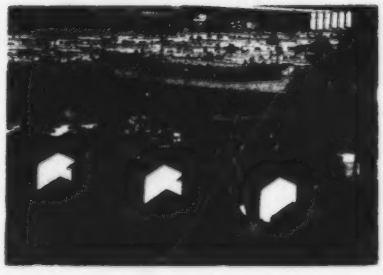
Northern Alberta has seen tremendous increases in housing over the last decade. Approximately 20,000 housing units were built between 1976 and 1981 throughout the North.

A common image of the North is of boom-and-bust resource towns; in fact, most northern housing is in centres that are growing steadily but not so rapidly as to cause housing problems. In rapidly-growing communities, provincial and industrial programs are implemented to help alleviate any housing shortage. Alberta Mortgage and Housing Corporation has, in the past, become directly involved in land development in communities where growth is expected. The Corporation also operates a variety of programs to assist or stimulate the housing industry to provide appropriate housing. In addition, the resource industry itself has created housing: from trailer camps in remote areas to construction in new towns, to transitional housing in urban centres for native people who have moved to large communities.

Cabin in the northern woods



New housing at Lac La Biche

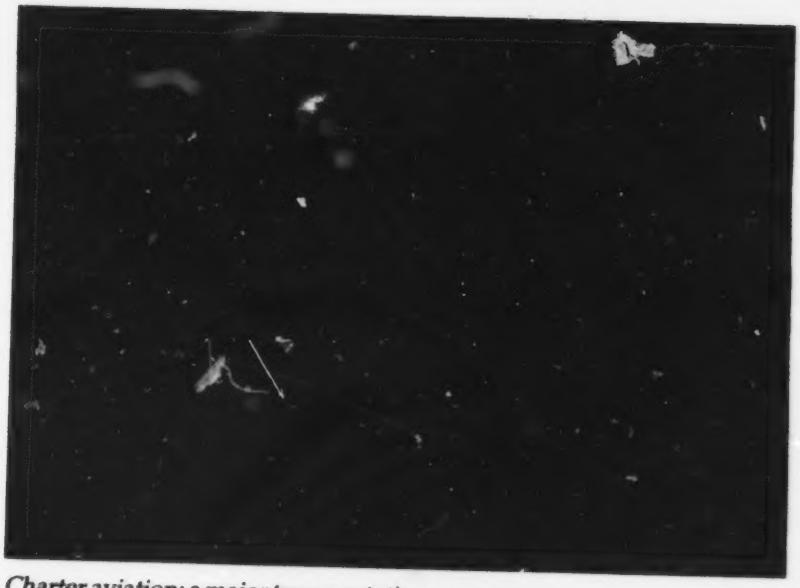


Housing and shopping in Fort McMurray

A logging truck reaches the mill

△

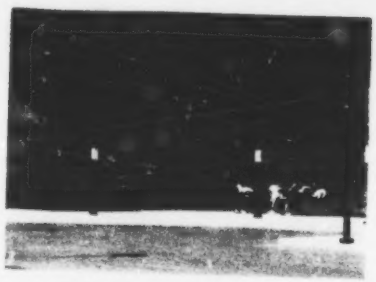
Infrastructure is crucial to Northern agriculture and tourism. ▽



Charter aviation: a major transportation component

SERVICES TO NORTHERNERS

The majority of northern communities have good health, education and social services. For those in distant centres, progress to improve accessibility of services is being made.



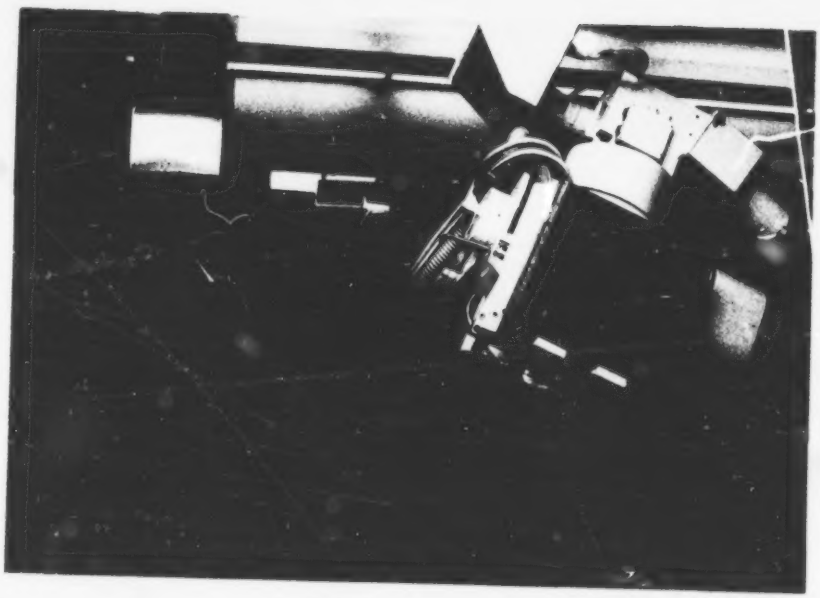
New hospitals are in many northern communities

HEALTH

The North is well-served by hospitals, with 28 active treatment hospitals providing more than 2,300 acute and auxiliary care beds. Ten of these hospitals have been constructed within the past five years. Virtually all centres having a population in excess of 1,000 and many with smaller populations have hospitals. Native settlements are served by nursing stations at Hay Lakes, Fort Chipewyan and Fox Lake, and by health centres and health stations located in a number of smaller settlements.

There are many more health professionals in the North than there were even a few years ago. For example, the regional mental health clinics in Grande Prairie and Peace River have 20 qualified mental health professionals, whereas in 1970 there were just three workers.

Such increases have contributed to an improved standard of health care which, in most respects, differs little from the south. Some remote communities suffer from lower health standards, but this is due in part to housing and infrastructure conditions and not solely to lack of health facilities. Such modern health and social problems as alcoholism, drug abuse and suicide also exist in northern Alberta. A variety of programs such as counselling and rehabilitation are in place in various centres to address these problems.



An x-ray technician

Dentist and dental hygienist in St. Paul

A young northern family

EDUCATION

The education system in northern Alberta embraces pre-school to colleges offering university-transfer programs. There are also flexible arrangements for distance education with modern technologies such as teleconferencing being used with imagination. Education is viewed as essential to the northern economic and community development process.

Teaching at Blue Quills School

Northern Alberta students have access to the most recent educational technology

Public and Separate School Systems

Northern Alberta contains 9 school divisions, providing education to about 59,000 students through approximately 3,000 teachers. The average number of years of schooling has increased over the past decade as has the quality of education delivered to northerners. Northern Albertans' education achievement is comparable to that of southern Albertans.

Through the use of radio and television services such as those provided by ACCESS (The Alberta Educational Communications Corporation), public and separate school systems are able to disperse a variety of curriculum support material widely across the North. Thus, disadvantages of distance and sparse population are overcome.

In addition to regular high schools, there are four comprehensive high schools offering strong vocational programs located in St. Paul, Grande Prairie and Fort McMurray.

In St. Paul, the public and separate

Pottery class in an elementary school

school boards, as well as the surrounding native communities, have co-operated to create the first regional high school system in the province. This is a model which has sparked similar initiatives elsewhere in the province. Blue Quills, a major educational institution for native students, is located near St. Paul. Many non-native students attend this institute also.

One school division is unique in northern Alberta in that it only recently included elected local representation on the school board. Northlands School Division embraces 24 communities, most of them isolated native settlements with schools having fewer than 100 students. With the restructuring of the Board in 1983, the effectiveness of this School Division has increased and has contributed to community and economic development amongst the native people.

Post-Secondary and Adult Education

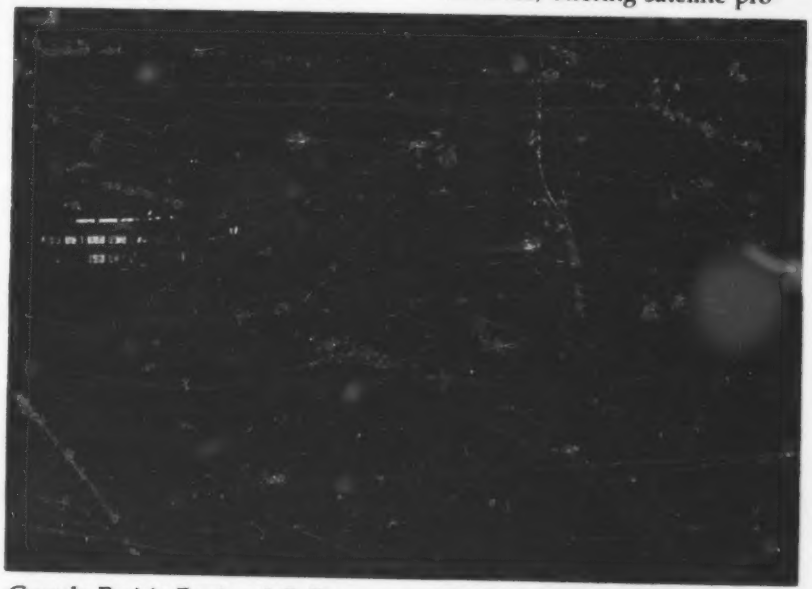
The variety of post-secondary and adult education institutions in northern Alberta makes continuing education and re-entry into the system for job training possible.

Alberta Vocational Centres (AVCs) offer short, intensive specialized programs to adults with less than a high school diploma and no marketable employment skills. The centres reflect the needs of northern residents and industry, offering courses in surveying, forestry work, trapping, Native arts and crafts, and job readiness/life-skills studies. AVCs are located at Lac La Biche and Grouard, and also operate satellite programs in other communities. One innovative program at Grouard is sponsored by Nova, An Alberta Corporation and trains native people in skills for pipelining.

Community Vocational Centres (CVCs) offer courses in academic upgrading, job readiness training, and such skills as secretarial or trades-training. The centres are specifically geared to meet the needs of native northerners. Centred on Slave Lake, there are about 20 CVCs throughout the Lesser Slave Lake, Athabasca and Peace River region.

Four Regional Colleges offer a good range of certificate, diploma, apprenticeship trades, academic upgrading and university transfer programs. Fairview College is attaining an international reputation for some of its unique programs such as turfgrass management and beekeeping. Grande Prairie College is noted for its performing arts division, which has resulted in the development of a 500-seat theatre and has helped foster cultural activities in the Peace area. Both Grande Prairie and Keyano College, in Fort McMurray, have industrial training centers; Keyano offers the most extensive heavy equipment operator course in western Canada. Keyano also has a performing arts theatre which serves as a nucleus for cultural activity in the community. A sub-campus of Keyano College is located at Fort Chipewyan. Sub-campuses of Lakeland College (in Vermilion) are located at St. Paul, Bonnyville and Grande Centre; these offer a wide range of part-time evening courses towards certificates or diplomas.

Distance education is an essential element of the North's fabric. Colleges, AVCs and CVCs all have many sub-campuses throughout northern communities, offering satellite pro-



Grande Prairie Regional College, one of four regional colleges

grams through the use of on-site instructors, home study and teleconferencing. The Mackenzie North Program operated from Fairview College has increased the educational opportunities for people in eight northern communities in the High Level-Fort Vermilion area. The North Peace Adult Education Consortium, initiated by residents of the area, co-ordinates the activities of several post-secondary institutions. The first of its kind in Alberta, the consortium has since stimulated the development of similar initiatives elsewhere in the province. Many communities have local further education councils which encourage and facilitate a variety of post-secondary courses and programs.

A wide range of courses are available

Located in the community of Athabasca, Athabasca University provides distance education throughout Alberta and elsewhere in Canada using home study supported by telephone tutors, radio and television programs sponsored by ACCESS, teleconferencing, and sometimes by direct seminar contact with instructors. Athabasca University is looked on as one of the leaders in innovative distance education in North America.

Contemporary business training

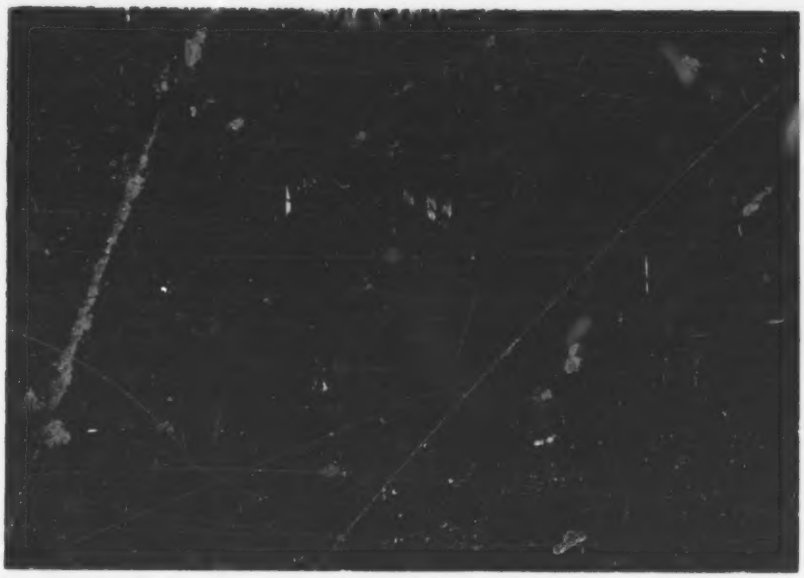
Biological researcher at Athabasca University

SOCIAL SERVICES

Social services are provided to northern Alberta by provincial Social Service Department offices, municipal Family and Community Support Services offices, and a variety of private agencies. Provincial Social Services provide such basic programs as social assistance, income support and community and mental health services. Family and Community Support Services (FCSS) include programs such as information and referral, homemaker assistance, child care services and family counselling.

The larger communities are well-served by social agencies. In some areas, such as the care of the dependent handicapped, vocational rehabilitation and some specialized child welfare services, the North has traditionally relied on services from outside its boundaries. It is the intention of the provincial Social Services Department to increase the extent of local resources in such areas, so residents will not need to leave the region to obtain the service.

An important thrust is the turning over of some responsibility for social services to local communities. For example, many alcoholism prevention and treatment programs are delivered locally, with support and assistance from the Alberta Alcohol and Drug Abuse Commission. The FCSS program is another example. A unique northern Alberta initiative is the Slave Lake tripartite agreement among eight Indian bands, and the provincial and federal governments. The purpose of this agreement is to involve native people in planning and delivering social services in their own communities. As of 1985, it is the only agreement of its kind in Alberta, and is rare in western Canada.



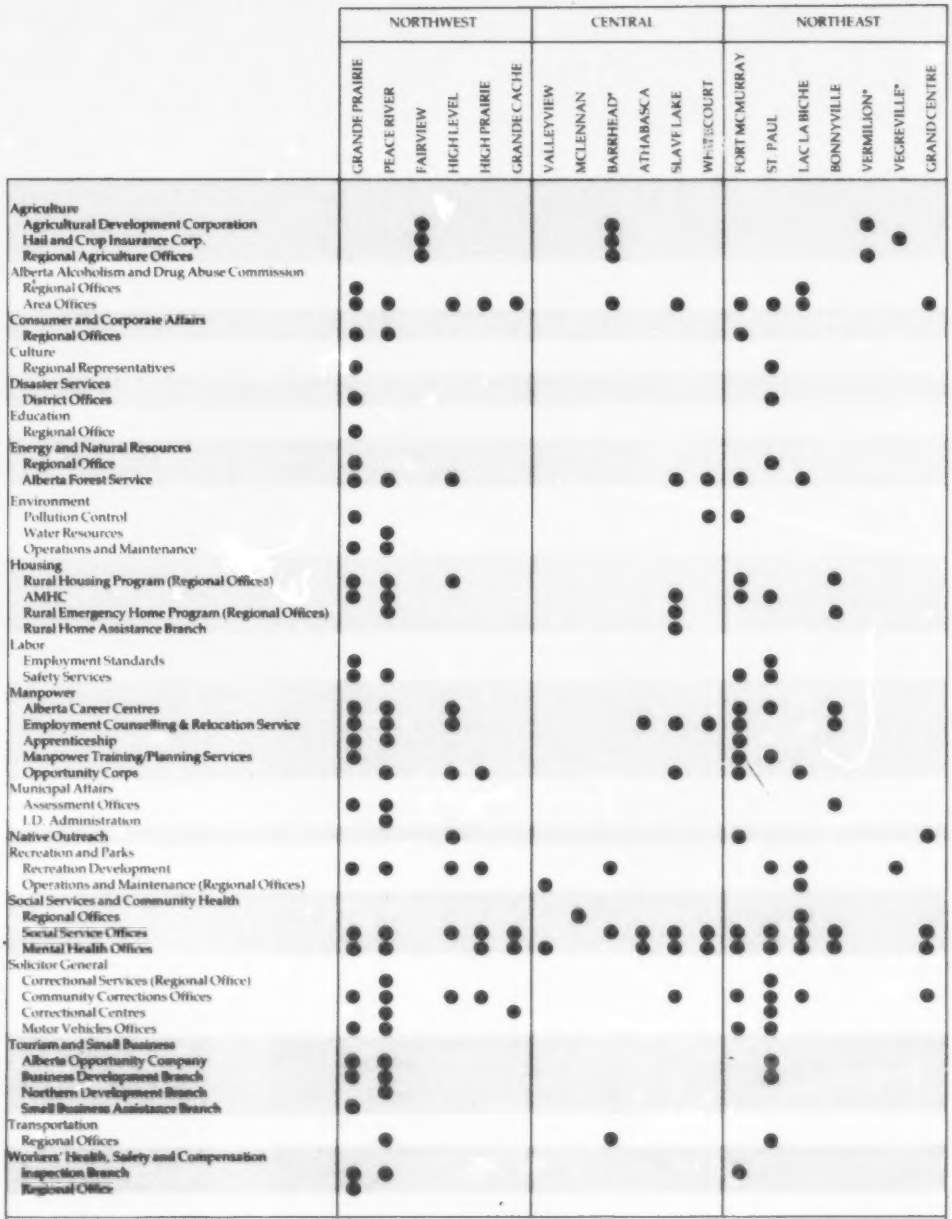
Administrative Centre in Northeast Alberta.

GOVERNMENT IN NORTHERN ALBERTA

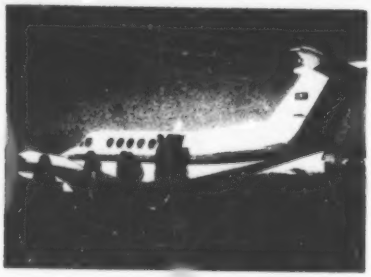
Most provincial government departments have regional offices in larger communities and some departments have field offices in communities of 1,000 or less. Virtually all communities with more than 1,000 population have provincial office buildings for the provision of such services as courts. As a matter of provincial policy, government branches or departments are being located in centres outside of Edmonton. Athabasca University is now situated in Athabasca; the Northern Development Branch of Alberta Tourism and Small Business is in Peace River. Alberta Transportation and Alberta Social Services and Community Health have taken major steps to decentralize their services. The range and diversity of provincial government services can be seen on the accompanying matrix.

The provincial building in Grande Prairie

Provincial Government Regional Offices



*These centres are outside the NADC boundary, and not all services located within them are listed. They are included since they house regional offices for some departments.



Aircraft are important to service delivery in remote areas.

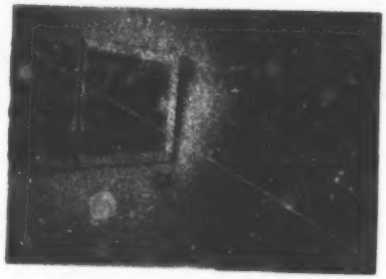
Business development advisory services are available.

An industrial training program on-site near Zama.

Modern facilities in Whitecourt.

CULTURAL AND RECREATIONAL LIFE

The North offers rich and varied opportunities to enjoy cultural and recreation opportunities. The wide diversity of its people's backgrounds is reflected in the range of ethnic and cultural activities. Its agricultural heritage has fostered fairs and rodeos; its native heritage can been seen in arts, crafts and cultural events. The historic element can be found in many rural sites and settlements, for example, at the restored mission in Dunvegan. The wide variety of ethnic backgrounds has created stimulating environments in some of the communities.



One of a number of northern art galleries

An artist at work

CULTURAL LIFE

Communities such as Grande Prairie, Peace River, St. Paul and Fort McMurray are urbane and modern centres, often surprising the first-time visitor. Such amenities as performing arts theatres, good quality restaurants and cafes, and specialized shopping opportunities make these communities attractive. Thriving arts and crafts activities are found in communities throughout the North--for example, Grande Prairie, Peace River, Beaverlodge, Athabasca, Fort McMurray and Lac La Biche. In addition to a vibrant group of potters, weavers, writers and other artisans the North supports a national quality art gallery, one of three of this calibre in Alberta. Located in Grande Prairie, the Prairie Gallery is housed in a designated historic site.

Grande Prairie is the first community in Alberta to receive funding under the provincial "Downtown Business Revitalization Zone" grants program. Under

A musician at practice

A young gymnast

nnual International Hot Air Balloon Championship in Grande Prairie

this program, funding is available to enhance the downtown. Activities in Grande Prairie have included developing a main street beautification proposal; evaluating plans for improved downtown parking; and painting brightly colored murals on downtown buildings.

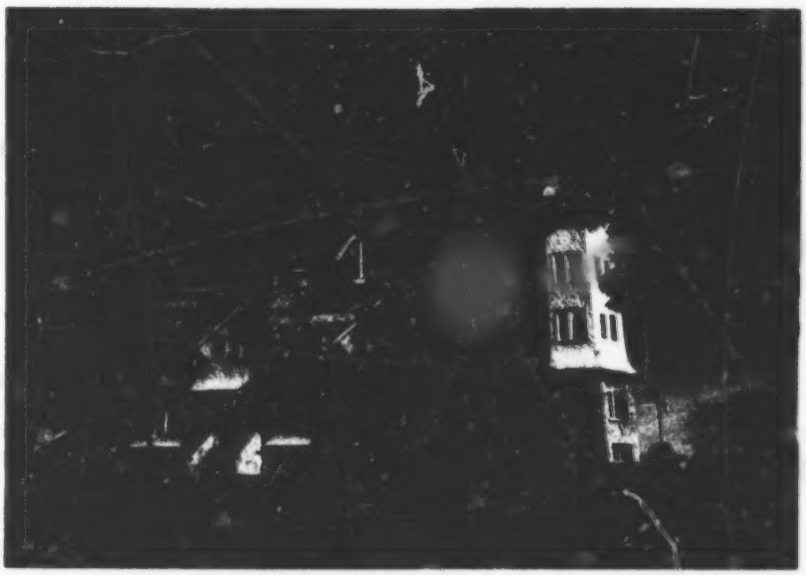
Many small communities have developed choral societies, drama and dance groups. In addition touring theatrical groups perform in the North. Some communities, such as Athabasca, have new performing arts centres. There is also an emphasis on the individual and individual creativity. The isolation of some northern communities seems to foster the artistic nature in people; stunning works of art are being created by people working in distant centres.

Most communities receive a wide range of radio and television stations; cable television is available in all centres of more than 1,000. Satellite dishes are becoming increasingly common across the north, and these bring communications from around the world to remote areas.

There are approximately 18 designated historic sites in northern Alberta, including some of the province's oldest locations. Provincially owned historic sites include Dunvegan and Bitumount. Dunvegan is the site of the most important fur trading post in the Peace River Valley, established in 1805, and of the St. Charles Mission established in 1866. Bitumount, 80 kilometres north of Fort McMurray, was the first operating "oil sands" project, producing roofing and road surfacing material from the 1920s until 1948.

The North is known for the broad scope of its folk culture and for the harmony found among people of widely varying ethnic backgrounds, including French-Canadian, Ukrainian, Mennonite, Scandinavian and native peoples. As well transplants from other provinces such as Newfoundland have made the North their home. These all contribute to the cultural life of their communities by developing museums, sponsoring ethnic dance clubs, heritage day festivities, music festivals and special holiday events, such as St. Jean Baptiste Day. Funding from the provincial Culture and Recreation Grant Program contribute to the development of these programs, events and attractions.

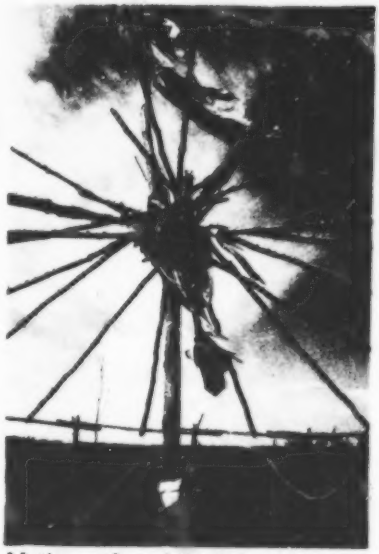
The office of the Heritage Franco - Albertan organization in the St. Paul Cultural Centre



McArthur Inn, a designated historic site at Lac La Biche

The North's first settlers, the Native people, are entering a new phase of awareness, taking pride in their heritage. Many Indian and Metis groups are working to preserve their culture. Some traditional skills such as trapping and tanning are being taught in the local community vocational centres. Children are being taught traditional dances and are learning the history of their people. In the Fox Lake and John D'Or Prairie area, native cemeteries dating from the early 19th century are proposed for restoration. Some Indian bands such as the Horse Lake, Saddle Lake and the Kehewin Reserves are constructing cultural and recreational centres, financed from oil and gas revenues or provincial grants.

The Native Friendship Centre in Grand Centre



Native cultural heritage is being fostered

RECREATIONAL LIFE

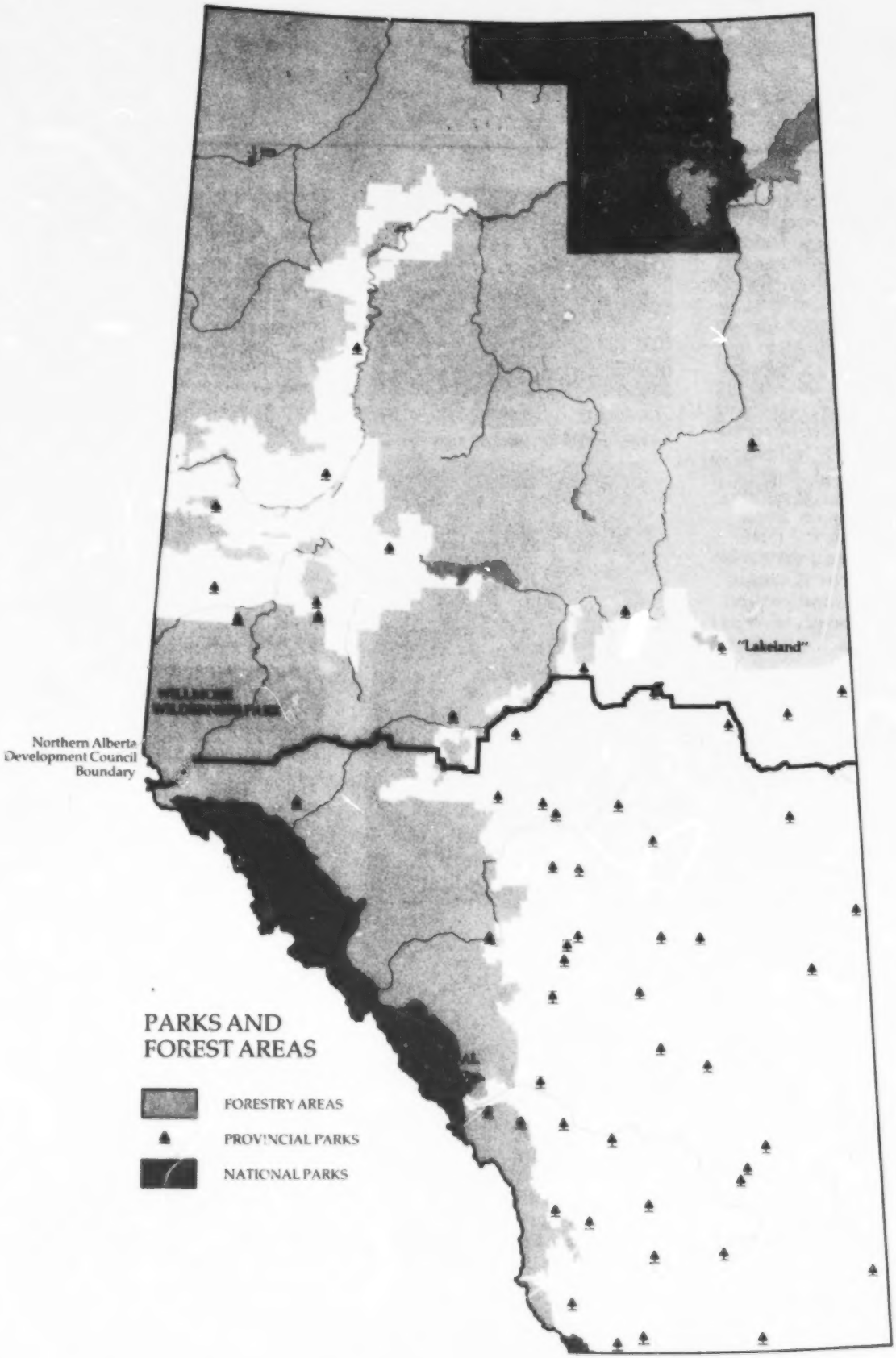
Most images of northern Alberta focus on outdoor recreation. While indoor cultural pursuits are significant in many communities, it is upon the North's diverse and rich resources of water, wildlife and scenery that the development of the growing tourist industry is based. The long hours of daylight in summer are an invitation to enjoy the outdoors and all that it has to offer. High Level, for example, hosts Alberta's only annual midnight golf tournament in June.

The range of outdoor activities which can be pursued in northern Alberta exceeds that of many other well-endowed areas. The wealth of water resources encourages boating, fishing, white water canoeing and kayaking. Grande Cache and Grande Prairie host white water marathon races every summer on the Smoky River. World-class jetboating is featured on the North's network of rivers. Northern lakes not only provide excellent recreational fishing opportunities, but many, such as Lesser Slave, Cold, Pinehurst, Beaver and Muriel Lakes also have excellent beaches for summer sunbathing. Other water-related activities include fish derbies, and festivals such as Aqua Days in Cold Lake.

The stunningly beautiful northern scenery and such pursuits as wildlife watching, camping and hiking can be enjoyed in the many parks. These range from municipal and provincial parks to Canada's largest, Wood Buffalo National Park. Located in the far northeast of the province, Wood Buffalo is home to the world's largest free-roaming bison herd. Wood Buffalo also offers some unique physical features such as salt plains and sinkholes. Activities include canoeing, hiking and naturalist tours. Access is available through Fort Smith in the Northwest Territories. Located near the Alberta border, this town acts as a service centre to the park. Fort Chipewyan at the southern edge of the park is a second access point.

Winter recreation

Wilderness and solitude, a fisherman's delight


"Lakeland"
Northern Alberta
Development Council
Boundary
PARKS AND
FOREST AREAS
FORESTRY AREAS
PROVINCIAL PARKS
NATIONAL PARKS

The North is well-served by other parks. There are more than 20 provincial parks in northern Alberta, about 100 roadside camping areas, 60 Alberta Forest Service camping areas, and 35 private and municipal campgrounds. In addition, the public is allowed access to much of the crown land, unlike regions where all land is privately owned.

Many communities have municipal parks. The one with the most variety is Grande Prairie's urban park, which includes hiking, biking and cross- country ski trails in a natural area; nature interpretive sites; lawn bowling and horseshoe facilities; picnic sites; tennis courts; playgrounds; an amphitheatre; visitors' pavilion; and a man-made lake.

The region's agricultural heritage has spawned the development of agricultural fairs and markets, race meets, rodeos and stampedes. World-famous ploughing championships are held each year in Wanham and there is a well-established horse-racing circuit. The variety of ethnic backgrounds in the northern fabric contributes to such activities as heritage day celebrations, festivities marking special events in various cultures, folk dancing and cultural events.

Urban recreational amenities include golf courses and arenas, sports grounds, such special events as trade or sports shows, and winter and summer games which rotate among different communities. Grande Prairie is called the "Hot Air Balloon Capital of Canada". This city hosted the first national Hot Air Balloon championship in 1979, an event which now takes place annually.

Beach at Moose Lake

A young girl playing baseball

Riding in farmland in the Peace country

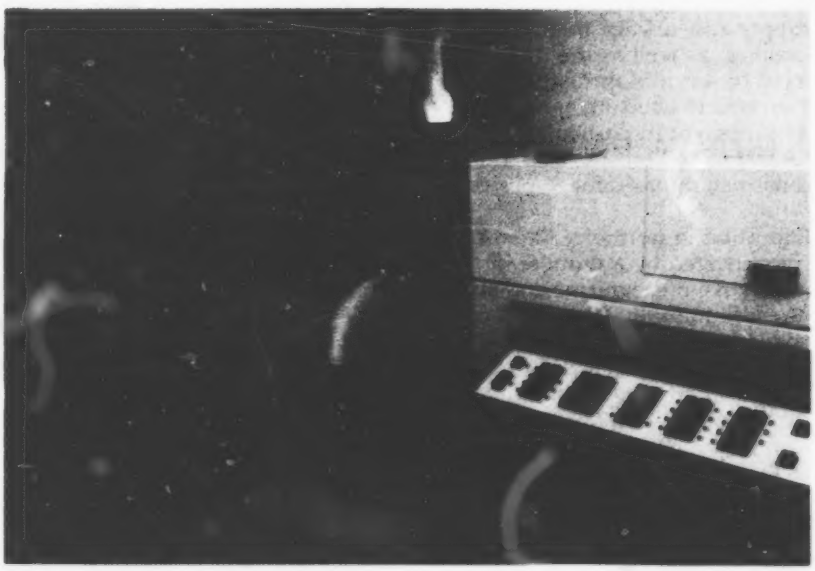
Winter in the North is also a time to enjoy the outdoors. Many communities have winter festivals or games – for example, the Bonnyville Winter Carnival. Activities such as ice fishing, cross-country skiing and snowmobiling enhance the northerner's way of life.

NORTHERN INNOVATION

The variety and contrasts within the North means that the tremendous opportunities it offers must co-exist with challenges to be faced. As part of the process of confronting these challenges, research and development activities are underway on a variety of social and economic fronts. Local communities and provincial government bodies, as well as industry and independent organizations, are conducting research, implementing innovative programs, and making decisions critical to the development of the north.

Economic development is assisted through local Regional Economic Development Councils (REDCs) which identify potential business opportunities, recommend programs and advise small business in an effort to help the North develop. With the assistance of groups such as these, coupled with other government and industry agencies, local communities are finding some success in their attempts to diversify their economic base. Development is ongoing in secondary processing of agricultural products, tourism facilities, industrial developments and government facilities.

In the oil and gas sector, some of the key initiatives relate to the experimental and pilot projects to recover tar sands oil using in-situ methods. As well, research on enhanced recovery from existing wells is an important program. AOSTRA is the leading agency in North America for research and development of oil sands recovery techniques. The oil and gas industry has been innovative in the North in experimenting with a variety of local hiring and native employment programs.



Quality testing at Esso Cold Lake

In the area of renewable resources, research is underway on utilizing deciduous hardwood timber such as aspen in the forest products industry. In agriculture, research and development activities include ways of working with acid soils, crop improvements and development of a breed of a honey bee capable of overwintering in Alberta. Other innovative programs in renewable resources include trapper education and fishery enhancement. Tourism development is a major initiative with a variety of programs underway to explore the possibilities of this relatively untapped opportunity.

Transportation infrastructure is critical to the continued development of northern Alberta, both in terms of opening up new lands for timber harvesting and agricultural expansion, and in terms of improving the accessibility of lands already developed. Improved transportation is a key element in making products more marketable, and remains a priority in the North.

Infrastructure improvements also are a northern initiative, with the continued upgrading of water

Future forests for northern Alberta

Northern research

supply and sewage treatment facilities, as well as the development of serviced industrial land. Two efforts affecting agricultural development in particular are the control of soil erosion and the construction of drainage projects.

Education in northern Alberta is characterized by a number of innovative mechanisms and structures: community vocational centers; adult education consortia and programs; other distance education methods such as Athabasca University or the Compuvan project, a travelling facility which makes new computer technology available to distant centres; projects aimed at native people such as the Sunrise project at Slave Lake which has made university-level courses available to the community.

Innovative social service programs include such facilities as Crystal Park school in Grande Prairie, a unique school for handicapped children which blends education with health care facilities. The Opportunity Corps project is an innovative program operating in several northern communities to provide on-the-job training to those with low skill levels so that they will become less dependent on social service programs.

There is now a wealth of experience in the North about mitigating the social impacts of major industrial projects such as tar sands developments. Industries involved have experimented with many different programs, including rotational shifts, job relocation programs, special housing programs, counselling, and local hiring policies.

Distance education is vital to the future

An NADC public meeting

The Northern Alberta Development Council itself is an innovative structure which has helped facilitate public participation, and has stimulated social and economic development. The Council is unique among Canadian northern programs and its techniques and successes are studied by other provinces.

"The north is unique and has much to offer, to not only southern Albertans but also to people from the rest of the country."

THE FUTURE

Northern Alberta has a promising future. Its land is rich; its people are strong. While the challenges are real, northerners continue to work hard to confront them, using imaginative and innovative ideas unique in North America. The economy is based on a treasury of resources which will provide a source of growth for many decades.

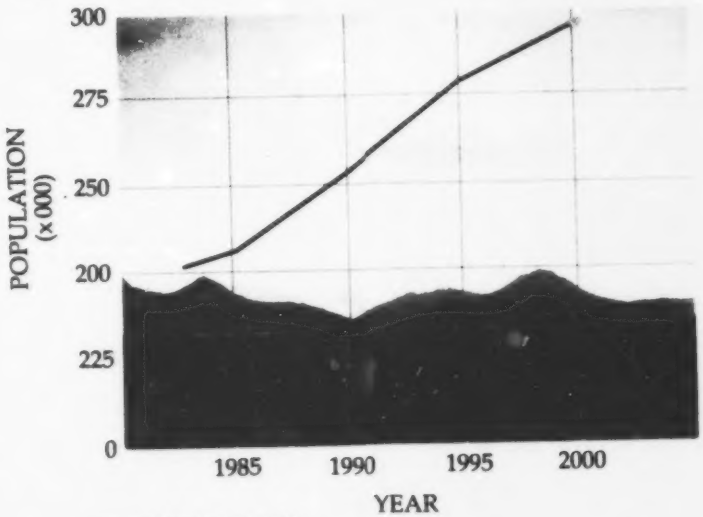
Energy will certainly continue to be a dominant feature of northern Alberta's economy into the 21st century, with oil, gas, oil sands and coal production contributing an estimated one-quarter of the provincial gross domestic product. However, changes are foreseen as a result of decreasing conventional oil and gas supplies, new technologies, and higher levels of oil upgrading.

The Energy Resources Conservation Board (ERCB) estimates that a growth of 20 per cent in primary energy production will have occurred in Alberta by the year 2000, with much of the focus centred in northern Alberta. Related service industries are expected to centralize in communities such as Bonnyville, Peace River and Fort McMurray.

The ERCB estimates reduced gas production by the year 2000 with much of the feedstock used in an expanded Alberta petro-chemical industry.

The fortunes of coal will improve in the longer term, with production forecasted to double by the year 2000. Some of this increased production will occur within northern Alberta. As well, the North's

Future Growth in Northern Alberta



Note: Population forecast includes only census Districts 12 and 15.

Background: Willmore Wilderness.

A new pipeline takes shape

water resources will probably be developed, with the construction of the Dunvegan and Slave River dams.

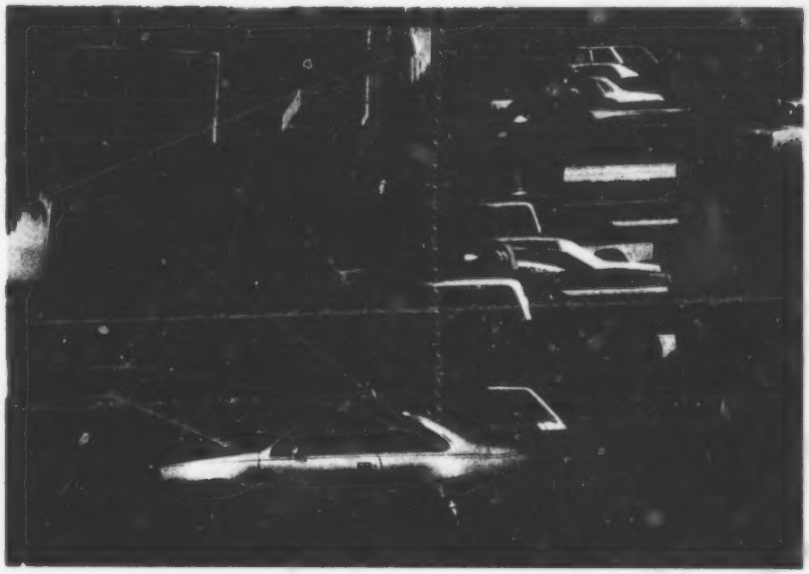
Finally, the ERCB envisions Alberta as a world leader in oil sands technology, resource management, application of enhanced oil recovery techniques and environmental controls, the majority of which will be developed in northern Alberta.

Renewable resource industries face a promising future as well. With continued research on northern agriculture and the opening of new lands, the North's agricultural importance will continue to increase.

Alberta's forest industry, based in the North, faces a bright future because of sound management practices such as reforestation and forecasts for continued long-term demand for forest products. With technological developments enabling utilization of the hardwood resource, the forest industry will continue to thrive.

Tourism is expected to increase across the North, as more and more people become aware of the rich wildlife resource, scenic attraction, heritage, cultural and ethnic events, and urban amenities in its larger centres.

The North is indeed a land of contrasts, and the benefits and costs of economic growth and change are not always distributed evenly among its people. A variety of social programs are in place to help all regions of northern Alberta benefit from its tremendous economic potential. Through research, programming, public participation, and community growth, the many riches, rewards and beauties of life in the North are being enhanced.



Street life in Athabasca

Northern land and water

A group of young children symbolizes the North's future.

THE NORTHERN ALBERTA DEVELOPMENT COUNCIL

The Northern Alberta Development Council (NADC) was established in 1963 as an advisory body to the Minister responsible for northern development to help in the investigation, planning, promotion and co-ordination of measures to foster economic and social development in northern Alberta. The Council has dedicated itself to increasing the dialogue and flow of information between the provincial government and the citizens of northern Alberta. It focuses on two principal activities:

- holding frequent, well-advertised, public meetings in various locations in the North to hear briefs from northern people and to provide answers to their questions
- developing policy and program recommendations for the Provincial Cabinet based on public meetings, conferences, seminars and original research into northern problems.

Since April 1, 1973, the Council has held more than 75 public meetings, sponsored a number of conferences and seminars, and received approximately 1500 briefs from northerners. It has undertaken well over 60 research studies, and prepared submissions to the Provincial Cabinet on many topics arising out of these studies. The Council has identified four objectives which it wishes to promote:

- to enhance economic and educational opportunities within northern Alberta in order to encourage young people to stay.
- to enhance the viability of traditional northern small town and rural life.
- to support the desires and aspirations of all residents in northern Alberta for a fair share in the wealth and potential of the area.
- to support the desires of various cultural and ethnic groups within northern Alberta for maintenance of their distinctive heritage.

Through its various research activities, conferences and meetings, the NADC is pursuing these broad goals. The Council is an innovative structure which can help attain interdepartmental program co-ordination, and focus attention on the opportunities and concerns of the North.

Northern Alberta Development Council 1985/86

Norm Weiss, Fort McMurray, Chairman
Joe Molho, Swan Hills, Vice-Chairman

Mary Bennett, Elk Point
Gene Dextrase, High Level
Betty Duckett, Grand Centre
Bob Elliott, Beaverlodge
Ernest Howse, Caslan
Cecil Jardine, Valleyview
Vincent Rice, Kinuso
Ted Sonntag, Hotchkiss

Credits

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Alberta Tourism and Small Business, Government of Alberta, Edmonton, Alberta
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